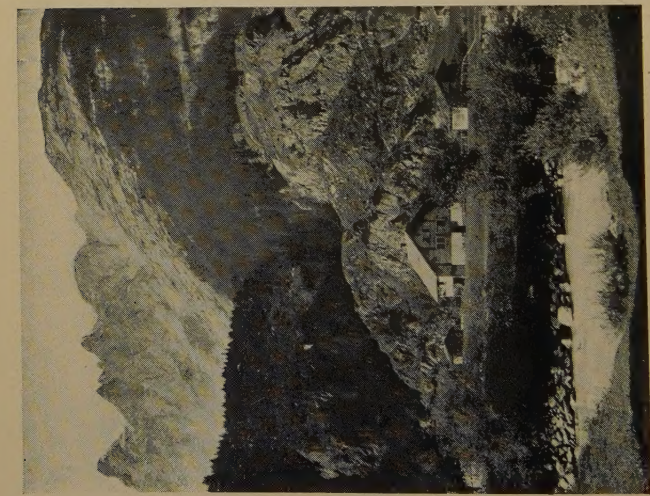


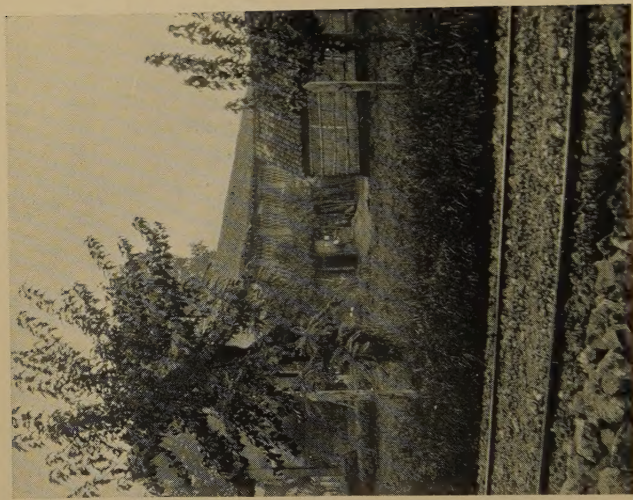


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Sunset tints the barren peaks of Alpine
emptiness



Mulberry leaves for silkworms grow in the
alfalfa in populous Po valley

MAN IN EUROPE

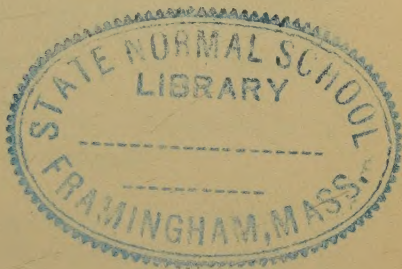
BY

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I have no mandate to define geography but of course I have a point of view, which is colored by my occupation of teaching teachers of geography. I want children to know where some of the more important peoples of the world are and what they are like; so first I want the teachers to know these things themselves.

I consider that a large undertaking. Very few people know what other nations are like. It is not so easy to find out as where they are. But we may be sure that they are admirable, all of them—that is, all the *best* of them! We can say no more for our countrymen. As for jails, they are everywhere.

The little book is for use in classes. It aims not to tell what the reader can make out for himself.

When it comes to teaching—I told my wife that she could lead a horse to water but not make him drink. She replied: “I’m not so sure. I can give him salt, can’t I?”

We shall try to give them salt.

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MAN IN EUROPE

CHAPTER I

EUROPE THE LEADING CONTINENT

Europe, though one of the smallest continents, is the leading one because its people control most of the earth. In every part of the world except China and Japan the men who rule, the men who control, are Europeans or the offspring of Europeans. In Australia and America north of the Rio Grande most of the people are Europeans, Europeans born in the New World, if you like, or *Europeans once removed*, but essentially Europeans. So are the leaders in South American societies. Even in Japan and China the leaders today are highly Europeanized.

As recently as 1913 Europe was able to compel all other continents to send her every year a much greater value of goods than she sent to them. That was because she had sent out her arts and her capital to the ends of the earth. All the world was beginning to wear European clothes, was beginning to make things with European machinery, and learning from Europeans how to develop its local material resources and to supply itself with European methods of transportation. Nothing so much differentiates the world of today from the world of the last century as modern rapid transportation, by steamer, by railway, and by automobile. Fully half the people of the world are now making daily use of articles brought to them by

these means of transportation, to the extent that the withdrawal of these agencies for moving goods quickly would be a real calamity to vast numbers of people of all social classes.

Ride with a Chilean muleteer on the trails of the Andes and admire his primitive poncho, a slit blanket that he wears over his shoulders with his head through the slit, a garment that has come to him from his aboriginal ancestors, a pattern from semi-civilized America. If you ride much with him you will find it handy to have a poncho yourself. Anciently they were made of vicunya wool. In the 1880's vicunya ponchos could be bought for two or three hundred dollars, painstakingly woven by hand, but the one your muleteer is wearing and the one you will be more likely to buy was made in England from wool of Australian sheep and cost but eight or ten dollars. The spurs that the mountaineer uses, picturesque with their huge rowels four inches across, are a pattern of his own developing. They are not so cruel as they look, for they are blunt, simply big because he likes them so. They were made to his pattern in English Birmingham. No order of his, of course: the Englishman found what the Chilean liked and made them for him. English business men are doing things like that everywhere. You could make in British factories a strange collection of garments and weapons of primitive peoples, manufactured in Europe to supply the wants of primitive men. Not a generation ago there was an English family in the Isle of Wight which supported itself making flints to export to Africa for the use of natives who preferred flintlock guns to percussion shells. If the English do not make boomerangs for the

Australian blackfellow it is because the blackfellow is too few in numbers to afford an important market, and has nothing to give the Englishman in exchange. But a thousand things that Europeans do want they have long been in the habit of getting by manufacturing for "natives" in all sorts of places the things the natives want.

The word *manufactured* is interesting. From being Latin for *handmade* it has come to signify *made by machinery*. The machine-made article is always very much cheaper than the handmade one and is always the result of study and thought applied to making the machines. When Europe sells her manufactures in the ends of the earth she is selling study and thought. She has wares to sell because Europeans have studied and thought more than other peoples. The primitive people who buy European culture must pay for it with their labor in collecting the natural resources of their own country to send to Europe. Their labor is cheap. The labor of those who do not think has always been cheap.

American or Japanese wares are of course essentially European in origin, being made by descendants of Europeans or imitators of European culture. Japan has power in the world today only because she has adopted European civilization. She is the only non-European¹ nation in the world that can make Europe respect her wishes. Japan has absolutely accepted European science, has made contributions of her own to it, and has adopted European weapons so completely that she would be a formidable adversary in war for any nation in the world. Her leaders wear European clothes.

¹ That is, of non-European people.

WHAT IS A COUNTRY?

Certainly Europe is the dominant continent. Continents are made up of countries as much as countries are made up of people. Geographies not long since regarded countries as just patches of the Earth's surface. But that notion will not serve the purpose of modern geography. The essence of the idea of a country is a group of people under one government who have a feeling of nationality in their hearts, together with the part of the material world that they inhabit and mainly draw their life from. The people, from the point of view of their feeling of belonging together, are a *nation*. The land the nation lives on, thought of by itself, is *territory*. Country includes both nation and territory. Territory is so different from country that young, growing nations like the United States and Australia adopt the word in practice for regions that belong to them but have as yet too few inhabitants to be fully a part of the country. So Alaska today is the last territory of the United States. Such were recently Arizona and New Mexico. Such is the Northern Territory of Australia, consisting in part of uninhabited desert which can never be a part of the country Australia, if people enter into the concept of a country as here proposed.

The French like to think of Algeria and Tunis as parts of France. The Sahara they can hardly regard as more than French territory. The American army balloon that was blown away from New York to the Canadian woods near James Bay landed in the Canadian wilderness two days' walk away from "Canada." Canada is not territory that has people in places. It is people, together with what territory they use, which is thereby part of the country,

and some that they do not use, which is not. If this is a new idea to you, do not refuse it on that account. So the telephone and the railway and the motor car were new to people very lately, but all have proved usable. Give the idea a trial and see if you can make any use of it.

France has Frenchmen for its most important element, Frenchmen in their native land. The people have no existence at all apart from their land and their land has come to take on manifold aspects that the people have given it in the twenty centuries they have lived there. The territory itself has been much modified by the nation that has lived on it and the nation has adjusted itself to this territory it has lived on. The first thing we instinctively do in a new country is to try to make it over to be like the one we left. The advice to do in Turkey as the Turks do is merely a warning against this tendency.

It is worth while to consider whether France and England would still exist if the two nations exchanged their territories and tried to live in their neighbors' lands. As a matter of fact they would not. The French would be very ill at ease in English homes in the English countryside, and the English as much out of place in French environment; and though both would set to work to change their surroundings to suit their habits, the task would react on them and produce not a Britain remodeled into France and a France reshaped into Britain but British and French landscapes remodeled into something new in each case, something that never existed before, inhabited by a new people. A new France and a new Britain would have been born.

Clifton Johnson's pictures of French and English home life—*Along French Byways* and *Among English Hedgerows*—should be read to make clear how each of these peoples has settled into its environment while shaping it to its own character.

INFLUENCE OF NATURE ON MAN

The French geographer Vidal de la Blache has taught that man is not so much the creature of environment as has been supposed but has rather seized on and utilized those elements in his environment which his character and culture have enabled him to react to. Into the physical environment of our Great Lakes have come in succession the Indian and the present-day American. The Indian adjusted himself to such elements in the landscape as the abundant fish in the lakes and streams, the fur animals and game in the woods, and the easy transportation on the waters by the canoe offered him by the birch tree. The casual use of a natural opening in the woods here and there to grow corn was a feeble precursor of the enormous crops we win from the soil today. The myriad transformations we have given to the timber of his forests are beyond all his horizons. Our main transportation by railway and our main occupation in elaboration of raw materials of our own and other lands into machines and wares—all this was reserved for men of an alien culture to his. The common environment did not create these different types of human culture, but each type of man reacted to whatever his racial inheritance enabled him to utilize in his environment.

Europe is the stage, then, where this racial inheritance

has been wrought out, that is, territorial Europe. But Geographic Europe, the Europe that includes man, has vague boundaries. Asia merges into it in Russia and the Balkans, and Africa merges into it along the Mediterranean. The best southern boundary is perhaps the Sahara.

Very great changes come over peoples who emigrate from one continent to another. The Canadians and Australians are very different from the English from whom they are descended, and the Argentines are not much like the people of Spain.

What shall be said of people who cannot maintain life in their native land? The people of Italy once answered a minister of Government who urged them not to emigrate that they "plant wheat and eat no white bread, cultivate grapes but drink no wine, rear animals but eat no meat, so that the land in which they cannot live by toil is not their country." Certainly it is no satisfactory country. It could not be a well managed one if the things they alleged were true, and they could not be blamed for wishing to abandon it for a better.

Now the way Europe has made other continents send her more goods than she sent them in exchange is rather curious and has taken various forms:

EUROPE'S COMMERCIAL CONTROL OF THE WORLD

1. She has built railroads and factories in other continents and set up there exporting and importing establishments which were profitable. The profits went to the European owners in the form of products of the land involved. Thus Argentine beef and wheat went to England to pay Englishmen for building the Argentine railroads.

English rails and English rolling stock had been sent out to South America, for which the English received documents entitling them to part ownership in the roads. According to the amount of their shares a portion of the earnings of the roads have to be paid over to them. These earnings are in Argentine money. As Englishmen do not want this in England, it is sent them in the form of Argentine grain and meat, which they do want. At the outbreak of the World War Europe had four or five billion dollars' worth of such papers showing ownership in enterprises in the United States alone.

2. Europe owned the ships that carried goods between countries,² so that the freight had to be paid to the European owner in foreign products, probably fifty million dollars' worth a year.

3. Emigrants from Europe sent their earnings home in money orders.

4. Travelers from other continents visiting Europe carried bank drafts with them to pay their expenses there. In the last two cases the order or draft was a bit of paper sent or carried to Europe and expendable there because Europeans can use it to send back abroad to pay for goods from its country of origin. A French cotton-mill owner is glad to get at his French bank a letter of credit on America that some American tourist has left there in exchange for French money. He wants American bank paper to pay for the cotton he bought in America.

5. We might add that European notabilities who come

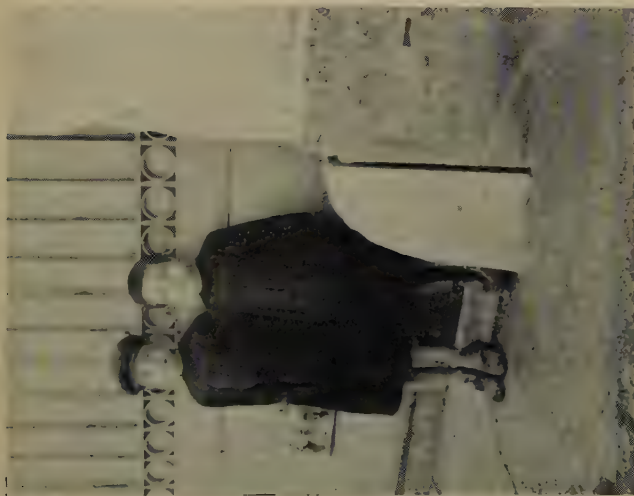
²Tons of shipping belonging in various continents about 1905—Europe, 18,880; North America, 6,177; Asia, 1,027; Australasia, 454, Europe having 71 per cent of the total.

to America commonly give lectures or other entertainments for money in America which more than pay the expenses of the trip, with the result that more American wares go to Europe. It is true Emerson did the same thing in England 80 years ago, but that has not happened often.

It seems curious that whether other-continent folks go to Europe or Europeans go to other continents the result is always that soon afterwards goods have to be sent to Europe—never the other way round. An Italian emigrates to the Argentine Republic and works on a wheat farm. With his earnings he buys a money order at the Argentine post office which he sends home to Italy. There it is paid in Italian money but really used to pay for the importation of Argentine wheat. But an Argentine tourist goes to Europe with a letter of credit from his Argentine bank and this too on being spent in Italy is paid for by a shipment of Argentine grain.

It is indeed one of the fundamental peculiarities of this continent of Europe. It appears that the services of Europeans have to be paid for by the people of other lands, whether those services are rendered in Europe or abroad, and that Europe does not desire or call for similar services from non-Europeans. And certainly the services of Europe to other continents have been very great. And they have been very well paid for, since it is also true that non-Europeans, in the newer parts of the world especially, have great wealth which they spend freely—even lavishly—to command the best services of European brawn or brains. But observe that this wealth of the non-European continents was mostly undeveloped until Europeans got at it. And it was not possible to develop it, which means

make it real usable wealth, until European capital was applied to it. What was this European *capital*? A case of actuality will help us to see. Kansas has wealth today in great crops of wheat. The fields were there long before any great crops grew on them. First, European people had to come to Kansas with their tools and their art of agriculture, and later railroads had to be built to carry a wheat crop to the markets. In 1920 Kansas raised 143 million bushels of wheat or 81 bushels for every man, woman, and child in the state. In no country do they eat more than ten bushels per person of the whole population, so Kansas produced eight times as much as she could eat. She is rich because she can get seven-eighths of her wheat to people who want it and will give Kansas what she wants for it. This seven-eighths is what Kansas has to buy with, it is what makes Kansas people rich; but without railroads they could not spend their wealth, for they could not get the crop to the people who want it. The railroads have literally made Kansas. If the railroads were taken away today and no good substitute for them left, Kansas would be miserably poor. American railroads were very dependent on European *capital* in getting built. We have come back to the word we set out to explain. For instance, they had to have iron rails which at first always came from Europe. Europeans invested money in stocks and bonds of our railroads and paid for them with iron rails and other supplies for our railroads and their builders. The curious thing is that this was done with the savings of the Europeans. These Europeans, less rich in natural resources than non-Europe, had saved what they might have spent and let other



1. The French save on their children's clothes



2. The sink faucets are at the public fountain



3. Touraine cottage—neat but
comfortless



4. Neighborhood washing places are
cheap and sociable

continents spend it, with the result of making great wealth available in those continents to spend for European services. It seems strange that the poor should lend to the rich but it is what happened. Europe practices thrift, which means that she constantly does without things that she wants, even though she has the money to buy them. These savings are her capital, which has enabled her to make all continents send her more than she sends them.

COMMERCE BETWEEN CONTINENTS IN 1908 IN MILLIONS OF DOLLARS³
(PERCENTAGES IN PARENTHESES)

NORTH AMERICA		EUROPE	ASIA
Received.....	1,730 (11)	10,522 (67)	1,707 (11)
Sent out.....	2,776 (17.7)	8,991 (57)	1,800 (11.5)
SOUTH AMERICA		AFRICA	AUSTRALASIA
Received.....	704 (4.5)	668 (4)	342 (2.2)
Sent out.....	968 (6.2)	704 (4.5)	422 (2.7)

Compare the figures for Europe with those for other continents. To do this write out answers to the following questions and when you have finished read them over rapidly, thinking of the story it all makes of Europe's place in modern commerce.

1. Which continent receives most?

³ These figures are rough. Some countries begin their year in January and some in March, so their figures for the same year are not really comparable. Some shipments start from the port of origin late in one year and arrive early in the next; exports for 1908, they are imports for 1909. Some countries try to ascertain the real values of the goods shipped. Others, like Holland, use still the values for a year long gone by, now false and misleading. And some countries report with much more care than others. Because of all these things the world receipts of the table sum up 15,673 and the values sent 15,661 instead of being identical.

2. Which sends out most?

3. How do the receipts of Europe compare with the sum of the receipts of all other continents? The answer should take the form of stating that one is equal to, or larger or smaller than, the other.

4. How does the value sent out by Europe compare with the sum of the values sent out by the other continents?

5. In what way do these figures show a similarity between all continents other than Europe?

6. Write in the difference below each pair of numbers in the table above, blue if exports be in excess, red if imports exceed. What obvious remark does an inspection of these figures call for?

7. How much more did Europe receive in 1908 than she sent out?

8. Is there any indication in the figures here given of the fact that most steamship lines lead to Europe and not between other continents?

These figures are for special commerce, meaning exports that were produced in the country and imports for consumption there. Fig. 5 was for *general* commerce. That is, it included goods in transit, foreign goods reexported and imports destined to be reexported, except for Serbia and the Netherlands where they could not be learned. Fig. 5 also included gold and silver, either coined or uncoined (bullion). In that form Europe imported 11,711 and exported 9,565 million dollars, and her excess of imports was over two billion dollars.

Of course people are not all alike and their differences mean a good deal to geography if we are to think of countries as made up of people. There are very great differ-

ences between countries for instance in this very matter of the values imported and exported.

TRADE BY COUNTRIES

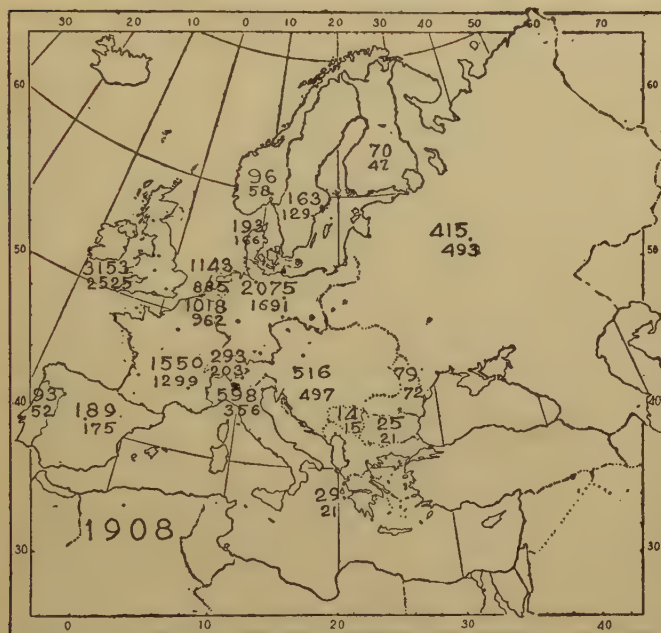


Fig. 5. Imports and Exports of European countries in millions of dollars. Imports are placed always above. Western Europe—see question 2—is to be tinted pale red. Countries with a surplus of imports over exports of 100 millions to be tinted a little darker red.

Is this the Europe of today? Look at the German boundaries.

1. Has any European country larger exports than imports?

2. How can we divide Europe so as to separate off such countries? As that part of Europe lies mainly east of the middle meridian of the continent—20° east of Greenwich—we call the residue western Europe.

3. United Kingdom, Netherlands, Germany, Russia, France, Switzerland, and Italy make separate reports for coin and bullion among their articles of commerce.

4. What is bullion? Often coin and bullion are omitted from commerce reports as not articles of commerce, but as they have to be sent now and then when money is due and no goods happen just then to be wanted that are available, the value of both should be counted.

5. How great is the sum of all commerce for the countries listed in paragraph 3?

6. What part of the total commerce of Europe is that? Can you make it over 80 per cent? That is large enough to give us very nearly the truth though for other countries we are uncertain whether this item has been included or not.

7. If we redraw the boundary of Europe as suggested in 2, what continent would Russia go with? As a matter of fact an aspect as of that continent has always been noted by travelers in Russia. Read up on this and see what you can report in class.

8. What sort of relation does this suggest between Russia and the rest of Europe in the matter of exchanges of art and capital for natural products that has been referred to above?

9. What does it suggest about the progressiveness of Russia?

10. What six countries had imports exceeding the value of their exports by over a hundred million dollars?

11. Which of the causes for greater imports than exports explains the case of Italy?

Most Mediterranean countries are poor in capital and send many of their people away as emigrants. The case of Turkey is plainly of this sort. Some 19 or 20 thousand "Turks" have emigrated from Syria to America, where most of them prosper as peddlers and send money back. Certainly no Turkish capital is invested abroad. Great Britain, Germany, France, and Switzerland best illustrate the workings of dominant European capital.

12. How? Why?

Japan's largest export—raw silk—is Asiatic, based on extremely cheap labor to care for the silkworms, but the railways, ships and business methods are from the West. In 1921 Japan made 61 million yens' worth of "Japanese" paper and 109 million yens' worth of "European" paper.

CHAPTER II

DISTRIBUTION OF POPULATION

Now let us look at the numbers of people in these countries.

WORLD AREAS AND POPULATIONS

Millions of people and of square miles

	N. A.	S. A.	Europe	Asia	Africa	Austral.	World
Population	148	50	482	887	166	8	1741
Areas	8	7	3.75	17	11.5	3	50.25

1. What percentage of the world's land area is in Europe? We ascertain by dividing 3.75 by 50.25 and moving the decimal point two places to the right: thus getting 7.4 per cent. What percentage of the world's people live in Europe? Either it must be a very good place to live or they must be very capable people that live there.

$$\begin{array}{r}
 50.25 \overline{) 3.7500} \quad (0.074 \\
 \underline{35175} \\
 23250 \\
 \underline{20100}
 \end{array}$$

2. How so?

Their distribution is shown in Fig. 6.

1. Name the five countries in Europe of largest population. Give them in the order of their size.

2. Compare Germany together with German-speaking Austria with England or France.

3. In Napoleon's day Russia had 39, France 27.5, Germany 25, Austria-Hungary 24, and the United Kingdom 16 millions of people. How did France compare in numbers with her enemies in those days?

4. Numerically the countries with less than 20 million inhabitants may be called minor countries.

5. How many are there? Memorize their names.

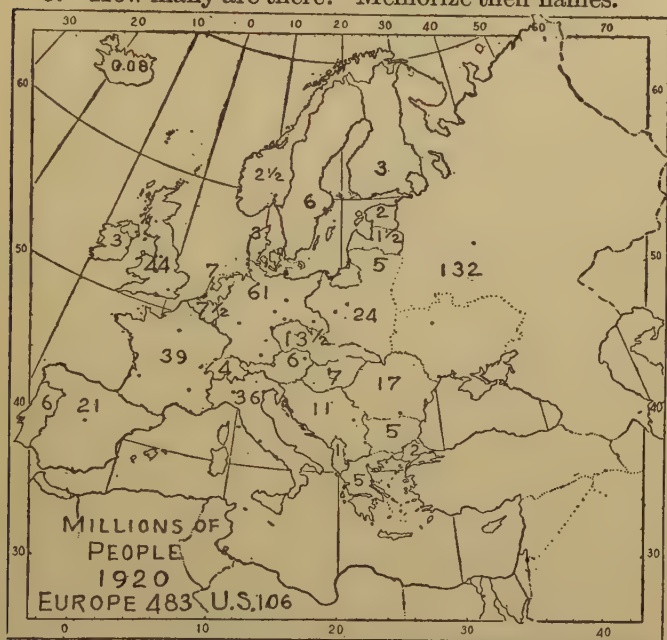


Fig. 6. The population of European countries in 1920. Countries with less than 20 million people are to be tinted pale green.

6. Where are they situated? In the central part of the continent or on its borders?

7. Can they act together in war?

8. Three or four in the north have a collective name, so have some in the southeast. What are these names?

9. Look at a relief map. What proportion of the

countries could you say are in hilly country? They may be said to be at the four corners of Europe.

10. What is their total population?

11. What are the names of the six Balkan countries? Montenegro is at present (1926) counted a part of Yugoslavia.

12. In what country is the Balkan mountain range?

13. What is the total population of the Balkan states?

That is sufficient to make a very influential country if they could only act together. It would be as large as France. But they afford only too good an example of the common weakness of Europe of thinking it love of country to antagonize and be unpleasant to their neighbors. If the essence of good manners is consideration for others, the international manners of European nations are very bad. The prosperity and power of the United States would disappear at once if they were 48 independent states, all making a merit of hostility to their neighbor states, and some speaking German, some French, some Italian and so on.

The relief map shows the Balkan folks occupying valleys which have only a little level ground. The very rough ground between helped to isolate these valley homes. You see this on the density of population map on page 28.

Isolation like that made the old Greek city-states—Athens, Sparta, Messene—so ready to quarrel with each other, and so unable to form a united Greece.¹ There

¹ The best possible illustration of this is a stereoscopic view published by H. W. White of Bennington, Vt.—No. 4217, The Langada Pass between Sparta and Messene. No one should fail to examine this picture. One can understand a Spartan who had traveled that trail saying he would never go back except by sea.

is only one Balkan state that has really important expanses of level soil.

14. Which one is that? Like Russia, it has been an important source of wheat for export.

In 1920 the Balkan states produced more bushels of grain per capita than France, had nearly as many cattle, one and a half times as many hogs, over twice as many sheep, and nearly four times as many goats. That means they do not lack resources to support life. Their lack is ability to work together; the long centuries of Turkish misrule together with the ruggedness of their land formerly made it hard for them to get about and become acquainted, so they are hostile to each other.

15. Note on the railway map on page 152 how little railway mileage the Balkan states have for each hundred square miles of area where the great countries of Europe have 20 or more.

16. What would be a fair number to represent the Balkans? What other means of transportation can be used well in Greece? Of course it is hard to build railways in mountainous lands, and of course that means that many a nook and corner of the Balkans is still isolated, still has no easy access to the rest of the world.

17. The division of the territory of the old Austria-Hungary among five countries is often called one of the follies of the Treaty of Versailles. That is quite a mistake. The war divided Austria. War is an evil thing. Once involved in war the Allies had to work to win and an admirable way to win was to stir up racial animosities among the component parts of the Empire of Austria-Hungary. This was done so effectively that it was im-

possible to continue the old Empire. Chees, Rumanians, and Serbians by their sufferings and their efforts in resistance to intolerable oppression had acquired rights that could not be denied. Find on the relief map reasons why the Checo-Slovaks, Yugo-Slavs, Austrians, and Hungarians should work together that do not exist for the Bulgarians and Greeks and Serbians. The parenthesis around the number for Russia means that it is for her European territory only.

18. What other countries might have a parenthesis on the same ground?

19. Why is it not necessary to bracket the number for Great Britain? What is the difference in this case?

20. Are Belgium and Holland separate countries for the same reason that the Balkan states are? At what date were they one country? Was the reason for their separation social or geographical? Probably one of them would have dominated the whole territory of both but for the intervention of the Great Powers.

21. What is the great defense that the Netherlands rely on even today? They used it against Spain in the 16th century.

22. Does it look as if Norway and Sweden might have room for many more people?

23. Why haven't they more?

AREAS OF COUNTRIES

The areas of Lithuania and Poland depend on boundaries yet to be agreed on. That of Russia is not certainly fixed, nor those of Turkey and Greece. The 32 thousand square miles noted on Ireland on the map is the area of

the whole island. The Irish Free State will be smaller by some six thousand square miles in Ulster at the northeast corner.

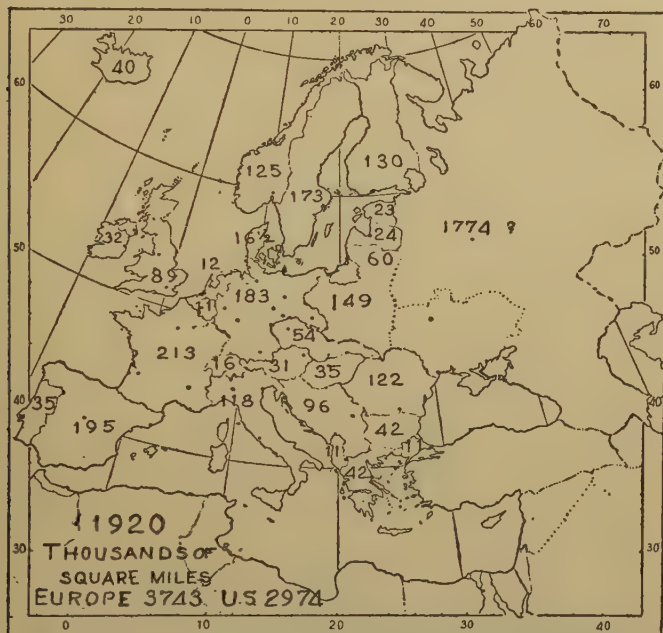


Fig. 7. Areas of European countries in 1920. The Ukraine is included in Russia.

1. Memorize the countries that have more than 150 thousand square miles area and those of less than 20 thousand.

2. What is the second largest country in Europe? In 1913 the five largest were Russia, Austria-Hungary, Germany, France, and Spain—in that order.

3. Which are the five largest now in order of size?
4. What change of rank in size has France undergone?
5. How does Great Britain, formerly eighth in size, now rank?

6. What percentage of the territory of Europe is in Russia (1,774,000 divided by 3,743,000)?

7. What percentage of the people of Europe (132,000,000 divided by 482,000,000)?

With all this large share in the population and area of the continent Russia is today almost without influence, except for her threats to stir up revolution in other countries, and is obliged to appeal to charity to feed a people who twelve years ago produced an enormous surplus of food. Whatever is thought of the Soviet government it does not pretend to have organized the Russian people, so that they can supply their own needs.

8. What is the average size of the 29 European countries?

9. Have they anything like uniformity in size?

They are large. The 48 states of our union are on the average about half as big.

The World War has resulted in the creation of six new countries—Poland, Checo-Slovakia,² Estonia, Latvia, Lithuania, and Finland, and indirectly of the Irish Free State. Gains of territory have been made by four of the Allies—Rumania, Serbia, Italy, and France: Rumania 68 thousand square miles, Serbia 62, Italy 7, and France $5\frac{1}{2}$. All of these have more people than before the War except France, which had about 39.6 million

²The usual spelling is *Czecho*, as *cz* in Slavic languages has the sound of English *ch* and *ch* the sound of English *k*, but as our usage is not Slavic it is better to write *Checo*.

people in 1913 but at the census of 1921 only 39.4 millions, in spite of adding Alsace-Lorraine, with 1.9 millions of inhabitants in 1910.

This is to be attributed to the fact that France has had a nearly stagnant population for some time, increasing on the average but a tenth of one per cent a year while Germany was increasing one per cent. It is normal and natural for the inhabitants of a country to increase in number. Practically all countries have done so through the whole of the last century, which is the period during which censuses have been made. Thus the losses of the war, which in most countries are easily replaced by the natural growth of population, have not been replaced in France. The losses of men killed in battle in the Great War are believed to be in Russia 1.7 millions, Germany 1.6, France 1.4, Great Britain 0.8, Austria-Hungary 0.8, Italy 0.5, Turkey 0.25, Belgium, Serbia, Rumania, and Bulgaria 0.1 each, a total of 7.45 millions in five years in which the normal increase in population of Europe would have been 19 millions.

Great Britain, however, as a result of the stimulation of the Irish sense of nationhood by the doctrines of self-determination current at the time of the Armistice has accepted a limitation of her direct administration of government to the island of Great Britain and the 6,000 square miles of northeastern Ireland and thus is some 26 thousand square miles smaller in territory and 2 or 3 millions less in population than the *United Kingdom of Great Britain and Ireland* of 1913. Neutral Denmark has gained 1600 square miles on the boundary with Germany, Danish-speaking people mostly who voted a

preference for Danish rather than German rule. Russia has lost her whole Baltic front to five of the new nations, a half-million square miles with 19 million people. The defeated Central Powers have all lost territory—Germany 26 thousand square miles, 6 million people, Austria 85 thousand square miles, 24 million people, and Hungary 90 thousand square miles and 14 million people. The boundaries of Turkey and Greece are still uncertain but will probably not change greatly from those of 1914.

POPULATION DENSITY BY COUNTRIES

The very dense population is what we have in the United States through southern New England. Here the chief occupations of the people are manufacturing raw materials brought from other regions. Through Illinois, Indiana, and Ohio on the other hand there are about 114 people to the square mile, corresponding to a moderate population and busied with agriculture but associating a good deal of manufacturing with it. Down South the population at present runs 50 to the square mile, toward the lower limit of the moderate population. The region is almost wholly agricultural though there is a certain amount of manufacturing.

1. What country has a scanty population? Probably no country in the world has a scanty population.
2. Do you see why?
3. What country has the densest population in Europe? England has 698 to the mile, but England is only a part of the country Great Britain.
4. Which are the least densely settled countries? Have they plenty of level land?

5. Name in order of density of population the five most thickly settled countries in Europe.

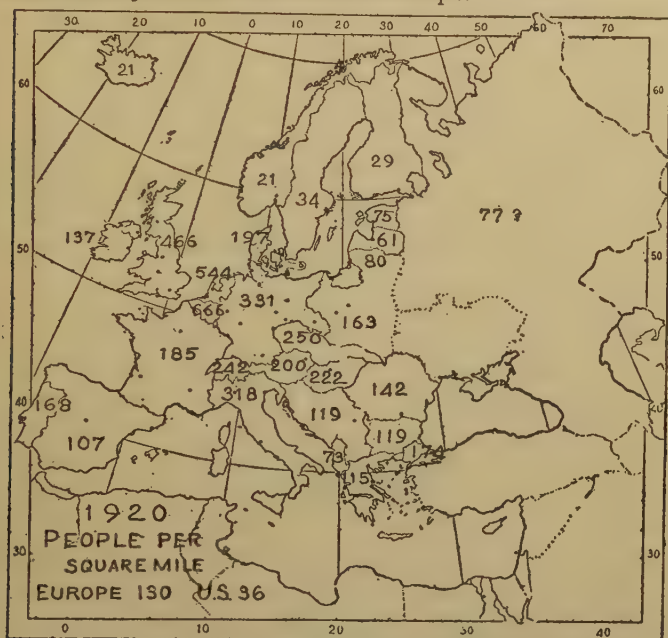


Fig. 8. Density of population by countries, 1920. Tint the map for the following grades of population density:

Very dense, over 250 per square mile, black.

Dense, 125 to 250 per square mile, red.

Moderate, 26 to 125 per square mile, pale red.

Thin, 2.5 to 26 per square mile, red dots.

6. With what American population group may we compare them? Have they similar occupations? One of their important industries is weaving cotton cloth from American cotton.

7. Do we import any of it?

8. Are their cloths finer or coarser than ours? Possibly you know some of the grade names.

9. Does it seem as if their designers and operatives were more or less skillful than ours?

10. How can they afford to take the raw material across the Atlantic and bring the finished product back to sell to us who have material and factories at home?

11. Have we a tariff on cotton cloths? Is it uniform on all grades?

12. What European countries have densities of population reminding us of Illinois, Indiana, and Ohio? Consult the relief map and note what a contrast to the level lands of those American states. Does it not give you an idea of European crowding to think of such dense populations in distinctly hill country, like New Hampshire or Northern Michigan? Yet our Corn-Belt states seem to us pretty populous.

13. Why is France less densely settled than Switzerland? Switzerland is much more mountainous. France has an ideal for families of one son and one daughter. Also France has a law that property must be equally divided among children on the death of their parents. How would each of those items affect the population density?

14. What sea has the densest population along its shores?

15. What one the least?

16. Why should Portugal have a denser population than Spain? Look up the rainfall (page 174), and if you find that the rainfall probably has some effect, tell something

about the rainfall of both countries and *what* effects it has in each.

17. Ireland has more rainfall than England. Why is it not more populous?

DISTRIBUTION OF POPULATION

1. What five countries have the largest areas of very dense population?

2. What five countries have areas of scanty population? Name them in order of the size of the scanty areas.

3. Locate six separate patches of scanty population.

4. What four countries have large areas of thin population?

5. What is the most widespread grade of population density in Norway? In Finland? In Russia?

6. In Poland? In France? In Italy?

7. Are these the average grades of these countries?

8. Can you name four countries with mostly a dense population?

9. Describe the distribution of population in Greece, mentioning the most widespread density first.

10. Which is the most populous part of Denmark—the peninsula or the islands?

11. What one country is densely peopled almost all over?

12. What nine countries have no very dense population?

13. Through what countries does the largest area of very dense population run? Along what parallel of latitude does it extend?

14. Which has the greater area of very dense population, Germany or Poland?



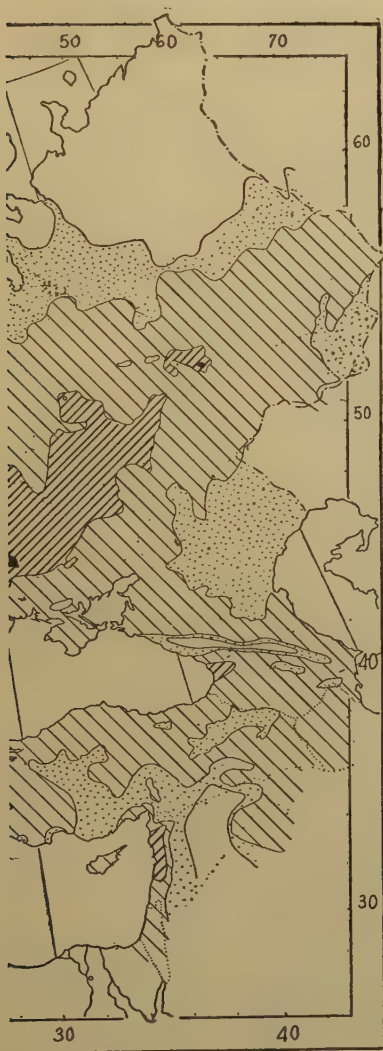


Fig. 9. Distribution of Population in Europe in 1910 after Wiese, Petermann's Mitteilungen, 1913, selecting five grades from the twelve colors of the original. It will make the map more useful if you reinforce boundaries with a thin red line, and tint seas and lakes pale blue.

15. Compare the location of the dense and the moderate population in the Iberian and Balkan peninsulas.

16. What grade of population is most prevalent along the shores of the Baltic?

17. How are population densities arranged from the mouth to the head of the Baltic?

18. What group of three kindred nations have their greatest population densities at the entrance to the Baltic?

19. What may we call the entrance to the North Sea? It has been called the funnel through which the commerce of the world is poured.

20. What is the density of population in the Italian mountains?

21. What on her lowlands? Italy is unique in Europe for high population densities in mainly agricultural communities, densities that usually go with manufacturing, for which the country lacks coal. This results in a low standard of living, more strenuous, more continuous labor, and less expenditure, less enjoyment of any comforts of life. It is this that drives the Italian to emigrate. He nowhere encounters hardships great enough to dismay him. He was brought up on hardship.

22. If more factories could be profitably maintained how would they change all that?

23. What grades of population-density margin the Iberian peninsula?

24. What grades of rainfall occur there? Explain what that signifies for men.

25. How many people per square mile there? In central Spain the masses of the people have no beds. They just lie on the floor. Their bedding is the clothes that they

wear in the day, which they keep on till they wear out. They are fortunate if they have a shed with straw that can serve them for bed.

26. Is that a high standard of living?

27. Does that mean that there might well be a denser population there?

28. What are the usual population densities of the Mediterranean plains?

29. A number of important coal fields occur roughly along the 50th parallel: have they connection, perhaps, with any feature of this map of population densities?

30. What five mountain ranges—do not count as such the Scotch Highlands or the Norwegian Fjells—show up on this population map? How?

31. What is the order in which grades of population occupy area in Europe? Which covers most?

32. Note the position of the greatest cities of the continent—London, Paris, Berlin, Vienna, and Hamburg-Altona—with regard to the largest areas of very dense population. Have they anything in common?

THE PHYSICAL REGIONS OF EUROPE

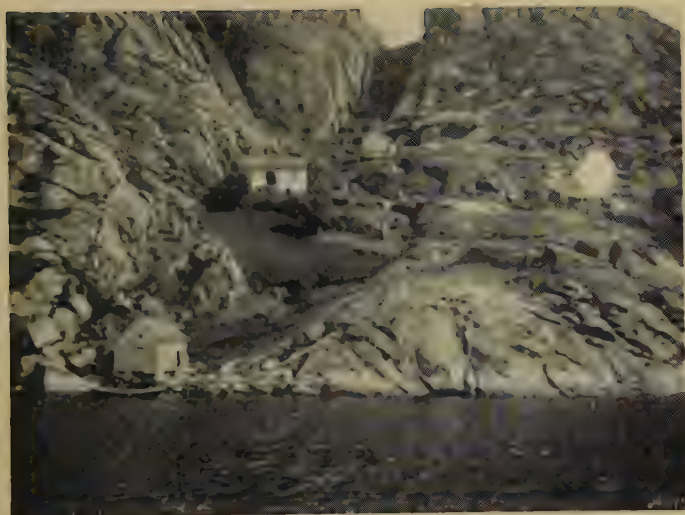
There are three major regions in Europe: the Northern Highlands, the North Central Plains, and the Mediterranean Ridges.

The Northern Highlands are not mountain regions but high rolling uplands of fairly even upper surface, cut across by deep valleys. They are called Highlands in Scotland, Fells in parts of England, and Fjells in Norway and Sweden. There is little soil on them and except in the valleys, which are known as *glen* in Scotland and *dal* or

fjord in Norway, they produce little but heather and a meager pasturage in which dwarf birches and willows figure largely. Travel is hardly possible except along the valleys. So the population is almost limited to the valleys or the points where the valleys open on the sea. The upland itself is everywhere a stony, desert waste.

The North Central Plains Region includes considerable areas of low, rounded mountains. On the plains proper are the principal expanses of soil of the continent that were anciently covered by dense forests. The mountains included have fertile valleys and are not high enough to prevent railroads and excellent roads from crossing them with some freedom. The forests were largely removed from the true plains during the Middle Ages except in Russia. In the modern epoch the soils of these plains are cultivated by the nations who have become the richest and most powerful of the continent. They produce there twice as much wheat and oats, ten times as many potatoes and forty-eight times as much rye as is raised in all North America (1909). The border of the low mountains of the Plains Region is rich in minerals which are also much exploited in modern times, producing twice as much coal as North America and one and a half times as much iron. It is one of the most productive regions of the Earth's surface, a fact not familiar in America because we are in the habit of comparing the productivity of the whole United States with single small portions of this continent.

Climatically the Plains Region is in the zone of the Spells of Weather of the prevailing westerly winds. It has summer rains and plants much like those of the eastern United States.



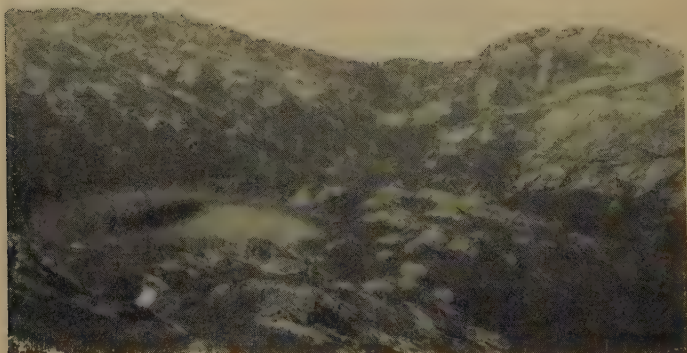
10. Rocky Norway has little soil



11. Stryn valley deep in the fjell



12. Loen is a patch of soil at the fjord head



13. The top of Norway—no soil, no homes

The Mediterranean Ridge Region is walled off from the Plains Region by high and fairly continuous mountain ridges which can be crossed only at occasional passes, as the crests rise two or three miles into the air. They cut off the winds from northerly directions, limiting the climate of this province to the subtropical type. The rains fall in winter, obliging plants to do without water when it is warm and without warmth when it is wet. Vegetation tends to a stunted form with thick non-evaporating leaves. The olive is the typical tree. The ridges of this region should be traced carefully on such a wall map as the Sydow-Habenicht physical map of Europe.

The lack of plains is a defect of the Mediterranean lands because it so much limits their agricultural possibilities. In the period of ancient history men lived mostly in tiny pockets of smooth land between the mountain ridges. The ridges are highly separative still. One may cross them only by a very painful journey which is always avoided as long as possible. Such a landscape naturally tended to promote and foster the multiplication of little states. Greece is today one of the tiny states of Europe. But anciently a baker's dozen of states were contained within those narrow borders: Attica, Boeotia, Phocis, Locris, Aetolia, Acarnania, Achaia, Elis, Arcadia, Megaris, Argolis, Laconia, Messenia. The cities of those days were hardly larger than our country towns, and every city a state. Our very word politics comes to us from the Greek word for city.

Is there any reason in geography for the following differences in numbers of foreigners resident in countries of the second and third regions in 1910?

PLAINS REGION	
Austria-Hungary.....	861,256
Switzerland.....	552,011
France.....	1,132,696
Germany.....	1,259,873
Belgium.....	254,547
Netherlands.....	69,982

MEDITERRANEAN RIDGE REGION	
Portugal.....	41,197
Spain.....	25,824
Italy.....	79,756

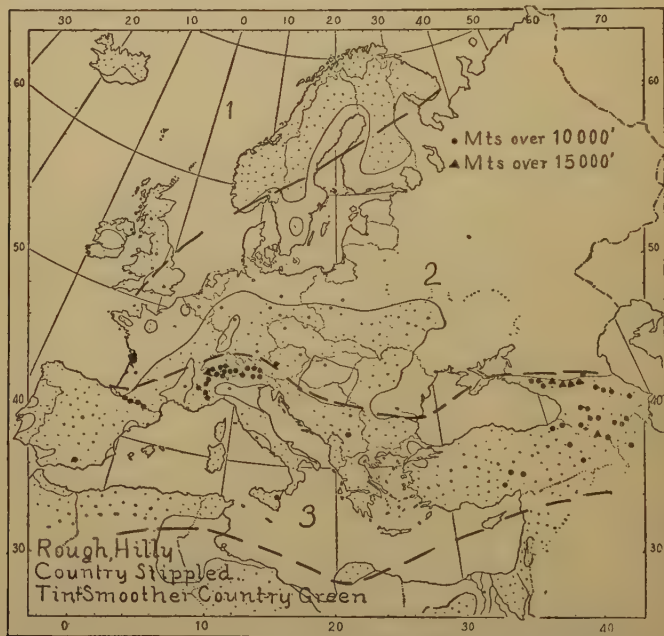


Fig. 14. The Physical Regions of Europe. 1, the Northern Highlands. 2, the Northern Plains. 3, the Mediterranean Ridges. The stippled areas are to be tinted pale brown and the white parts pale green.

1. What countries have their most important population in the Plains region?

2. What one country is wholly in the Northern Highlands province?

3. Which million-cities of Europe are on the plains (the green areas)?

4. Which half-million-cities are on the plains?

5. Can you locate fourteen plains areas in the Mediterranean Ridge province?

6. Name a plain in Hungary.

7. Name two plains in Germany.

8. Name two plains in France.

9. In which province do fewest people live?

10. In which province are all the lofty mountain peaks?

11. What is that high peak on the Swiss-French frontier?

12. What mountain range has most high peaks?

13. Which are the three loftiest ranges in Europe?

14. What fifteen-thousand-foot mountain in the Asiatic part of our map?

15. What Italian peak reaches 10,000 feet? Has it a story?

16. Name the eight countries of the Mediterranean Ridges.

17. Which is the largest of the Mediterranean plains?

It is instructive that the plain of the Po which today contains so much of the best in Italian life, so many people, so many cities, so much productivity and culture, was not included in the old Roman Italy at all. They regarded it as Hither Gaul, that part of Gaul which was on *their* side of the Alps.³ It is instructive also to note that the real

³ Note at page 188 that the Summer Woods region includes the basin of the Po, while Old Italy is all in the Mediterranean region.

founding of Roman power was in winning control of the Mediterranean from the Carthaginians, for the Mediterranean is itself a great plain affording unequaled ease of transit in every direction. From its extremities came supplies to Rome in every direction, and Roman troops moved swiftly across it to the borders of the Empire. The Empire consisted indeed of the Mediterranean shores. Away from them in Britain and Persia their hold was always weaker. A great plain is essential to the rise of a great nation and it is a *plain* as long as it is easy to cross! The Sahara even in its flatter parts is no such plain, because climate makes it so hard to traverse. A moderate degree of ruggedness, on the other hand, as in much of the southern part of the North Central Plains province of Europe, always allows fair ease of transit. Russia's greatness is its unrivaled position on the great Eurasian plain, which is certain to afford enormous power of expansion when Russia is freed from inefficient political systems. The greatest Empire in the world rests on control of the world-plain of the ocean, which England wrested from Spain in the days of the Invincible Armada. In the palmy days of ancient Rome the great northern plains of Europe were occupied by dense forests of Summer Woods. Ancient history really ended in Europe and modern history began when these forests were cleared, making room for the great nations of the north, about the fourteenth century. The forest cumbered those plains as drought today cumberes the Sahara. They became plains in our modern sense only when relieved of this encumbrance, as the plains of the Amazon may some day be relieved of theirs.

CHAPTER III

THE CITIES

EUROPE'S GREATEST CITIES

Separately the inhabitants of a country have little significance. It is in the places where they gather that society, the arts, culture, and literature develop. Villages, towns, and cities are the home of society, though men may labor in fields, forests, and mines. And village, town, and city are markets all. Anciently in Europe a city meant chiefly a place of safety behind sheltering walls.¹ Many a little city over there still preserves its walls. Some, like Carcassonne in the south of France, have had them restored for a show place, but it is instructive to note that modern Carcassonne has outgrown the old walled city and lives on one side. Chiefly poor immigrant Spaniards live within the old citadel. The purposes of defense fit ill with any modern concept of a city. Most of the greatest cities of the continent have broad boulevards that mark the old walls not far within the busy structure of the city. The Grand Boulevards of Paris, which run along the fortifications of Louis XIV's Paris, are the scene of the modern city's busiest life.

Nowadays the market aspect of the city is well to the front, the cities have become so many and so vast and the daily service of the multitude a work so imposing.

¹ Look up the distinction between city and town in England.

The economic momentum of all these goods rushing from country to city and from city to city is enormous. That is why the organized Labor of Europe, wishing to make its power appreciated, makes the impressive gesture of stopping all that movement every first of May.

THE MILLION-CITIES

The million-city is the luxury market. Things are for sale there that find too few consumers in any lesser place. There is much more to a city of a million inhabitants than twice as many people and buildings as in a city of half the size. Shops, museums, artists, and artisans of the highest grade are to be met there, which no smaller place could hope to retain. Rich men are to be met in minor cities, but the number of the rich in a million-city is so large as to command the services of the country's greatest talents, and even bring talent from abroad. As soon as Professor Brunhes has distinguished himself at a small university in French-speaking Switzerland he is called to Paris to teach there, and Professor Brückner from German-speaking Switzerland to Vienna. The place where you can buy whatever you want is surely the best place to take your own wares for sale, especially if you are confident of their unusual excellence. And the process goes on with growing momentum. One city in a country is likely to outdistance all its fellows in growth, and once ahead of them it draws away at a striking rate. London is six times as big as the next British city, Paris five times as big as Marseilles, and Berlin three times as big as Hamburg-Altona.

The Mediterranean has developed no million-cities. Constantinople has been habitually estimated as of mil-

lion size, but the first attempt at census makes it now 880,000. And Constantinople is not in the class with Europe's million cities. "No modern industry lives within her walls. The great mass of the population is unproductive and impoverished and lives directly or indirectly on the city's character as central point of the Turkish Empire and Islam."² Moreover, the adherents of Islam who look to Constantinople as their capital are Asiatics and more than Turkey's 23 millions, many, many more, in Asia and in Africa.

The existence of two almost equal cities of the half-million size in Spain introduces to our attention the separatism of Catalonia. No fact can be more vital in actual Spain. On our definition of country Spain is twofold; two groups of people, each with a sense of nationality, inhabit it, Spanish at Madrid and Catalan in Barcelona. The four half-million cities of Italy introduce to us the aloofness of Rome, the religious capital, from political Italy, the newness of united Italy—there was no Italy until 1870—and the distinctness of North and South Italy.

What stimulates one city rather than another to grow to million size? Not royalty. Up to most recent times kings and courts have had tremendous influence in the growth of European towns, but the court has always found it possible to follow a shift in population when a smaller town has forged ahead of the royal residence city. The decisive factor has always been position—advantageous position in the midst of great expanses of fertile soil and on the great lines of economic movements. Where a nation's

² Philippson, *Mittelmeergebiet*, p. 242.

pathways converge, there the million-city grows. Lines of communication and cities are the first features of a country's geography. Europe is old. The momentum of the past is strongly felt into the present, and much of the importance of present pathways is derived from ancient use. The rivers are the original pathways, in use for centuries before man made the roads that have largely supplanted them. But rivers and canals are now of much less importance than is commonly supposed, even in Europe. When they are provided with proper terminals and when the cost is charged to the goods moved it is found that their service is costly and incomplete, and likely to dwindle much in the future. Only in handling coal and iron ore do they seem economically solid. Paved roads vastly diminished the use of these waterways, and the railroads have now well-nigh superseded them; but of old they dominated everything. Every great city lies on an old river highway of central position in the land, at the point where the most important ford crossed it. An island in the river most often served to locate the ford and to make the initial settlement defensible. At such a point lines of travel converged from at least four directions. London, Paris, Berlin, and Vienna all illustrate this type of location. Excellent city plans are given in Brockhaus's *Konversationslexikon*. Can you perceive a similar crossing of the ways at Constantinople and Copenhagen?

The War had a distressing effect in eastern Europe. Riga in Latvia on the Baltic had 569,000 inhabitants in 1915 but could count only 185,000 at the census of 1920, estimated to rise to 285,000 by 1923. It is instructive to

make a graph³ of the growth of St. Petersburg, 918,000 in 1881, 1,267,000 in 1897, 2,074,000 in 1910, and—now Petrograd—2,319,000 in 1915. After the revolution of 1917 the population had evidently fallen off enormously. Empty houses were the rule. It was estimated in 1920 at only 600,000. The authorities report it in 1923 at 1,067,000. Now it is Leningrad. When the city had a million inhabitants 200,000 peasants were included who lived there only winters, spending their summers on their farms, like the old-time cabmen of Paris. If these had become 500,000 in 1917, the revolution would have kept that number out of town; but there is a further million people missing. That is a terrific loss of people that Bolshevism is accountable for. Moscow suffered less: in 1910, 1,780,000, in 1915, 1,817,000, and in 1923, 1,543,000. In 1924 it was called 1,511,045. But Soviet Russia has made no census. Possibly some influx of Soviet functionaries has tended to replace greater losses there.

The breaking up of the Austro-Hungarian Empire has had opposite effects on its first and second cities. Vienna from 2,150,000 in 1915 dropped to 1,842,000 in 1920, but Budapest rose about as much, from 880,000 in 1910 to 1,185,000 in 1921. Vienna, the capital of an empire of 52 million persons, suffered a fearful blow when stripped of all but six million of its customers in the luxury life. Budapest on the other hand rose from second place to first, first in the Hungarian Republic, and had the new functions of the head city to fulfill. At the same time refugees crowded in from the lands once Hungarian, now ceded to

³ Let an inch represent ten years horizontally and a million people vertically.

Rumania, where two million Hungarians were left marooned among Rumanian neighbors. But it is a very large city for a state of seven million inhabitants.



Fig. 15. Million-Cities and Half-Million-Cities, 1924. The million-cities have a white center which should be made red.

1. How many of these cities have over a million people? Name them and the countries they are in. In all the world there are only twenty-three cities well ascertained to have over a million inhabitants.

2. How many cities of over half a million are there in Europe?

3. What two countries have more than five of these very great cities each?

4. What five countries have three very great cities each?

5. What two have two each?

6. What six have only one?

7. Can you find twelve countries that have no city so large?

8. Why have these twelve none?

9. How many of these cities are ports for ocean ships?

10. How many are on rivers of no great importance?

11. Which cities are capitals of their states?

12. Is there any general relation between the number of people in one of these countries and its number of very large cities?

13. Why then has Russia fewer than Germany?

14. Which is the smallest European country, excepting Denmark, to have a city of half a million or more?

15. What is the name of Denmark's half-million-city? It has in the past rather dominated all Scandinavian countries. Up to the seventeenth century southern Sweden was always a part of Denmark. Probably it still has some appeal to the nine million Scandinavians outside of Denmark. The Scandinavian countries have languages very closely related to each other; Norway and Denmark use practically the same language.

16. Learn thoroughly the names of these thirty-five cities. This is the main item in connection with this map.

Count the million- and half-million-cities. Europe seems to have one of these big towns for every 14 million inhabitants. North America has one to every 9 million and South America one to every 12½ million. In Africa there is but one in 166 million people. I have called the

THE MILLION-CITIES AND HALF-MILLION-CITIES OF EUROPE IN
1924 WITH POPULATION IN THOUSANDS

London.....	7,476	Amsterdam.....	696
Glasgow.....	1,034	Rotterdam.....	532
Liverpool-Birkenhead, etc.	1,116	Hamburg-Altona.....	1,154
Birmingham.....	945	Berlin.....	3,804
Manchester.....	989	Cologne.....	641
Sheffield.....	523	Leipzig.....	636
Paris.....	2,906	Dresden.....	588
Lyons.....	562	Munich.....	631
Marseilles.....	586	Breslau.....	528
Lisbon.....	486	Prague.....	677
Madrid.....	764	Vienna.....	1,863
Barcelona.....	720	Budapest.....	929
Turin.....	502	Copenhagen.....	701
Milan.....	719	Warsaw.....	936
Rome.....	689	Leningrad ⁴	1,067
Naples.....	772	Moscow.....	1,543
Brussels.....	784	Odessa.....	631
		Constantinople.....	880

big cities luxury cities. Here is a scale of desire of luxury for several continents. North America shows it most, then South America, then Europe, but all these in roughly comparable amounts. Africa has fourteen times less of the feeling. The feeling is all European, of course. That is where we got it. The aborigines of America want no million-cities. That America shows greater love of luxury than Europe comes of the greater wealth of new lands, which further have not learned the frugality of old ones.

⁴ St. Petersburg up to 1914, then Petrograd to 1924.

An American is known to pay a high price for peaches in Paris, an Argentine is reputed to offer more than the price, but a Frenchman usually does without the peaches.

GREAT CITIES

But smaller cities than those of a half-million up are centers of high culture, of high progress in the arts, of advancing civilization.

The city of 100,000 that I call arbitrarily a Great City is a focus of important cultural influences.

Like the greater cities studied, it too is a luxury city, an active market. First of all and most visibly a market for daily food, occasional fuel, and not infrequent replacements of clothing. Then, as all cities normally grow, building materials are in evidence to construct new homes.

Europe is old and thickly settled, but it grows and its cities grow. The Netherlands, for instance, is very densely settled, 563 people to the square mile for the whole kingdom of seven million people. Nearly a century ago, in 1829, it had 200 people to the square mile, with little more than two and a half million inhabitants. Although densely settled at the start it has doubled and almost trebled its population in the century. That is not a bad growth for a densely populated country. They have steadily added 14 per cent of the population in each of the last four decades. Michigan in the same period, in a new, almost empty country, has only added 28, 16, 16, and 31 per cent. Amsterdam has grown from 180 thousand inhabitants in 1815 to 400 thousand in 1890 and 696 thousand in 1922. Rotterdam had but 72 thousand people in 1830 and has now 532 thousand. They have built many new houses in

those cities. There has been much hauling of building material for a work so vast, and no little study and skill has been displayed in rearing five- and six-story houses of stone and brick on the marshy soil of Holland.

That is where the Dutch have been learning engineering and architecture, in those and the forty-five other Dutch towns of more than 20,000 people.⁵

But invisible things too are among the market attractions of these cities: education, social life, religion, and art are sought in them and found there. They find their market there. A very active market they afford, too, for labor of any grade of skill. The ignorant are wanted in great numbers in all good seasons, and for the most highly skilled there is no other market.

It is often said that people are flocking from country to city in all parts of the world, referring solely to this active labor market in great cities, but it is a careless statement and untrue. The last century and the present one, with their development of machines of every sort, have seen an enormous upspringing of cities—new cities, most of them, of course—and a similar active growth in size of the old ones. Country population has grown, too. There are more people working on farms today than ever before, but they have not increased in number so fast as city folks have. It was not possible for them to do that. Country occupations have been so augmented in power by the application of machinery that much fewer days of man's labor are needed to grow a thousand bushels of wheat than a generation ago, so that relatively fewer men are needed on farms than formerly. Really, of course, we must regard

⁵ See Bok, "I Didn't Know That," *Atlantic Monthly*, Oct., 1922.

the man who makes an agricultural machine in a city factory as doing some of the farmer's work for him; or, if you like, we may say some of the farm work has been taken to town to be done there.⁶

If a country's population were stagnant, if its population did not at all increase from year to year, the children born on farms would be in excess there. They are more than numerous enough to replace as they grow up all the labor of the last generation and continue raising the same amount of food—all that the market could absorb, possibly all that the ground could yield. But at any rate the occupation of farming appears to be dull and monotonous to the generality of men while city life appears to offer a most delightful variety of ways of living.

A country's great cities have grown up as the people got control of its resources, as they discovered and began to use them. They are located at economic foci of production and exchange, as Cleveland at the meeting place of Lake iron and Pittsburgh coal,—or where the focus once was, as Grand Rapids, producing furniture amidst the hardwood forests of Michigan and still making it now from distant supplies. Europe has nearly two hundred of them. Their place and size are shown on Fig. 22.

1. What countries have forty of them?
2. What country twenty-three?
3. What countries have four great cities?
4. Can you make out seven countries with one each?
5. Name Portugal's two, and those of Rumania. One of these was in the Russian province of Bessarabia before the War and was called Kishinew by the Russians.

⁶ See "A Hopeful View of the Urban Problem," *Atlantic Monthly*, Sept., 1913.

Many, perhaps a majority, of the people of Bessarabia were of Rumanian speech and perhaps wished to form a part of Rumania rather than of Russia. It is not at all easy in such cases to find out what people really want. At any rate at the close of the War they were annexed to Rumania, a country which had suffered severely in the conflict. The name is now *Chisinau*. Very many changes of that sort have been made in central and eastern Europe as a result of the War, but this is a trouble only to us foreigners. People on the spot have always had different names for the same place. Thousands of places had two or three or even more names in use by inhabitants speaking different languages. But the making official and obligatory of a new name is one of the current irritations of post-War Europe. Kishinew had 125,000 people. Chisinau has 114,000.

6. Can you imagine why?

7. Would any class of people prefer to leave Kishinew?

8. What one country of Europe has no great city? Why? What sort of country is it?

9. What one city has really no country? That is a condition created by the War. Before, it was a city of some importance in a great Empire speaking its language (ninety-four per cent of the people still do that) and engaged in commerce for it abroad. But a new country to be created as an inescapable result of the War had no seacoast, and no outlets for commerce with the outer world except through the ports of its old-time oppressors. This would not do, the will to annoy is too rampant in all those lands, so the city was taken from the Empire where it belonged by all political and geographic rights and made a "Free

City," really a city without a country. Custom-house unity ties it to the newborn state; sympathy and larger business volume, one imagines, must tie it to the old Empire. In nature cities spring up as men create them and the men in the back country are the essential ones. London lives by the life of England. What would it amount to with a tight wall around it and no gates? I am not referring to a mere matter of food. Even if a daily miracle sent it food its purpose in life would be gone. What could it work at? What could it do?

10. Name two great cities of Sweden. One is an open port all the year, the other is ice-bound for months like Detroit.

11. Which is ice-bound? Why?

12. Which sea has most great cities in its neighbor countries?

13. Which physical region of Europe has most great cities?

14. Two large countries, Great Britain and Germany, have the greatest number of great cities. Does Russia also have many?

Russia with 132 million people has twenty-three great cities, but France with less than a third as many inhabitants has fifteen, which is out of proportion. We should expect only seven or eight. On the other hand France has almost ten times as many people as Switzerland and not quite four times as many of these big towns. Evidently different nations do not make themselves great cities in proportion to their numbers. Switzerland has one for every million inhabitants, Sweden one for every two million, Portugal one for every three million, Bulgaria and Russia one for every five million or more, and Rumania the modest

provision of one great city for every eight and a half million of her inhabitants. Evidently rural, agricultural people must predominate there. That may make them appreciate all the more the cultural value of Bucharest, their only great city up to the War. At any rate they have the habit of referring to it as the Paris of the Balkans.

15. What sort of surface does the relief map show in Rumania? It has a sufficient amount of rainfall, coming in a warm summer. Might that be good farming country?

Compare the crops in our country with the Rumanian crops. Our country contains 2,974,000 square miles, Rumania 17,000, that is 175 to 1. We could divide our country into 175 states of the size of Rumania. The grain produced by the two countries in 1922, in millions of bushels, is tabulated here:

	U. S.	RUMANIA	RATIOS
Corn.....	2896	94	
Wheat.....	810	88	
Oats.....	1230	86	
Rye.....	80	7	
Barley.....	196	85	
All Grain.....	5212	360	14 to 1

Over five billion bushels for the United States and a third of a billion for Rumania, fourteen to one in our favor. Is that much of an agricultural showing for a country 175 times as large as another? How many times more ought we to produce, to produce on Rumania's scale? Write in the ratio of production for each grain in the table. Rumania must be a highly agricultural country. That puts Rumania very low in the scale of culture which the tendency to build cities hints at. We must remember that in

the past Rumania's farm class has been of landless peasants working for owners. They are attempting to overthrow that system of landless peasantry all over eastern Europe, an admirable enterprise if they can make it. Time enough for the peasant when he has got his land, learned to work it, and won himself a small beginning of security, to plan a little of the fascination of the city life. Why hesitate to admit that most people find city life more attractive—hours, tasks, diversions, and all?

Finally, the finest man-made things in the world are likely to be kept in cities. In general, the more cities in a country the more civilized the country.

MILLIONS OF PEOPLE TO ONE GREAT CITY

Switzerland.....1	Hungary.....2.3	Estonia.....5
Great Britain.....1.1	France.....2.4	Lithuania.....5
Germany.....1.5	Greece.....2.5	Bulgaria.....5
Latvia.....1.5	Norway.....2.7	Serb, Croat and
Netherlands.....1.7	Irish Free	Slovene State.5.5
Belgium.....1.9	State.....3	Russia.....5.7
Italy.....2	Portugal....3	Checo-Slovakia .6.8
Sweden.....2	Finland.....3.4	Rumania.....8.5
Austria.....2	Denmark....3.4	
Spain.....2.1	Poland.....4.8	EUROPE 2.5
		U. S. 1.7

Earlier numbers of Europeans per great city were 8.3 millions in 1800, 5.6 in 1850, 4.3 in 1870, 3.1 in 1895.⁷

	1871	1891		1871	1891
Great Britain.....	1.9	1.3	Austria-Hungary...	12	6.8
Germany.....	4.5	1.9	Spain.....	5.7	3.4
Netherlands.....	1.8	1.5	France.....	4	3.2
Belgium.....	1.2	1.6	Denmark.....	1.8	2.2
Italy.....	2.7	2.5	Russia.....	14	8

⁷ Meuriot, *Des Agglomérations urbaines dans l'Europe contemporaine* (Paris, 1898), page 32.

These numbers afford a good measure of the *urbanization* of Europe, which has increased in intensity 300 per cent in the century. How low it was in Germany in 1871, when the Empire was just born! Note the still lower urbanization of Austria and Russia.

In these figures:

	1871	1891	1921
Great Britain.....	1.9	1.3	1.1
Germany.....	4.5	1.9	1.5

we see Germany after the victory over France in 1870, entering the industrial and commercial world in which Britain was then supreme; we see how Germany in 1884 had come to be so industrialized, so fully emerged from her earlier devotion to agriculture, that her products had begun to demand markets abroad, that she realized that she needed colonies, and seeking them in Africa, forced the definite partition of that continent among European Powers, thus definitely embarking on that career of imperial expansion in which—to use the phrase of German scholars before the War—she found herself everywhere “blocked” by Great Britain, which had been making the world over to suit British needs for nearly a century.

Germans had to sell in British colonies and buy raw materials there. They had to settle their accounts through British banks and establish credit in London. They found German steamers on which they traveled printing their menus in English. They had to use British cables to communicate with their agents in other lands, believing that all their messages were open to the examination of British trade rivals.

When a British company consented to lay a cable

to Buenos Aires in return for a concession which forever denied to others the privilege of landing a cable there, they were merely securing their investment with no thought of any future expansion of Germany, but they were nevertheless preparing a terrible grievance for the German company of a later day which carried a cable from the Fatherland to Liberia on the west African coast and took it across the Atlantic to Brazil but was shut out of the Argentine by the British concession.

The figures show Germans in the 70's "flocking to the cities," as the phrase is, with Germany coming into the same class as England and finding that England was in all the desirable places before her. Shock after shock followed between the established colossus and the would-be one, to culminate in the Great War.

The figures, in other words, show Germany waking up to the desire of becoming one of those countries which our school texts like to say are "unable to feed themselves" but which in reality are able to buy the choicest morsels in all markets with the wealth acquired in industrial and commercial occupations.

Study the very interesting figures for Denmark and Belgium.

On reference to the map we see that a flier making a direct journey from Toulouse to Paris would not pass within a hundred miles of any city of 100,000. In either England or Germany it would be hard to find such a line of half the length. France does not run to large cities. Her way seems to be to satisfy most of her large-city needs in Paris. Of course smaller cities are scattered over France, but no more than in neighboring countries. Count-

ing all the towns above 20,000 inhabitants, Germany has two or three times as many of them in the upper Rhine valley as France has in a comparable area including the city of Paris. The French do not much tend to build up cities. For large numbers of Frenchmen the outlook on life and its desirables is quite different from that of many or most of the Germans or English. We shall come back to that in the next chapter.

A heavy broken line⁸ on Fig. 22 encloses the main industrial area and incidentally most of the large cities. Nine of the million cities and sixteen of those of half a million lie within one or another of the areas. The four small outlying industrial areas should not be overlooked; three of them about important factory cities, but the Swedish one rather strikingly avoids the largest Swedish city. Possibly it is itself industrial—most great cities are—but lacks factories in the country about.

The War is still a very important factor in Europe's geography, not only in devastated fields and cities that have not yet been completely cleansed of war contamination and in painful police and passport regulations but in broken relations of the towns that have been violently shifted from one national control to another without regard to their organic relations to a countryside and in disturbance of the normal growth of city population. The shifted cities are Strasbourg, Trieste, Kishinew and Agram, not to speak of nations liberated from foreign rule.

Learn what shift was made in those four cases and the reason alleged for the change.

⁸ Taken from a map of Europe, 1924, by the Swedish geographer, Sten de Geer.

Manufacturing industry has been quite upset, and this comes out in the retarded growth in population of the great manufacturing cities. As you look over the list of British cities you will see how little many of them have grown. This confirms what we hear constantly of depression in British manufacturing. The total population of those forty British cities grew only seven per cent in the war decade, though they had gained twelve in the ten years preceding. Belgium, which Germany occupied and kept busy manufacturing for German use, gained greatly in Brussels but lost in Liège, Antwerp, and Ghent. Holland, which was neutral, took on twenty per cent by industrial growth in the war period. Dutch business fared pretty well. But France seems to show the damage done in her only industrial region. Her cities grew only two per cent! All French population grows slowly of course, but the cities used to do better. Just before they had been increasing at the rate of thirteen per cent a decade. The forty German cities added twenty per cent in the war decade, and that looks large; but a large group of them had increased in the previous decade by thirty-five. Still the German industrial towns seem to be growing vigorously as if they had—up to 1922 at least—been well occupied with work. And this is well. Nothing else can enable Germany to pay the reparations due from her, and that appears to be what Europe needs to establish tranquillity. An examination of the city data on pages 61 to 66 will demonstrate that all four of the Dutch cities made good gains. A number of the German towns fell off, among them Gelsenkirchen in the Ruhr, but the increase at Essen is notable, doubtless a result of war-time activities.

The list leaves no doubt of the general increase in population of German cities during the War period. This causes some surprise in connection with food, which was constantly

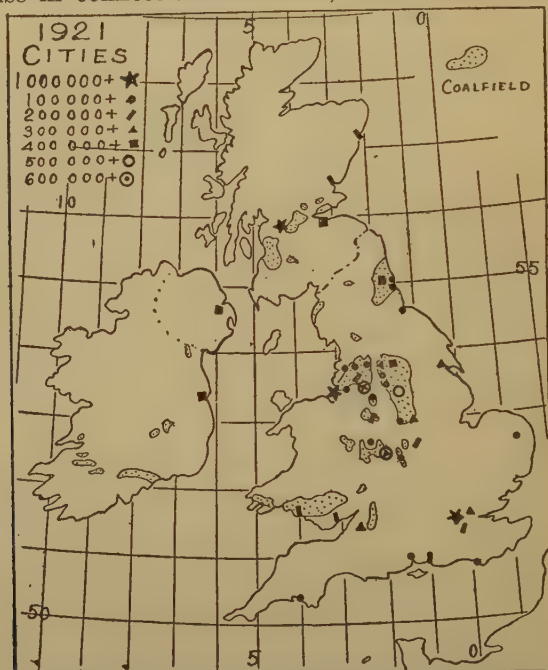


Fig. 16. The great Cities and Coal Fields of the British Isles, showing the extraordinary closeness with which British industry locates itself upon the coal deposits. There is no hauling coal to the factory here. The same cities may be made out on Fig. 22.

reported relatively abundant in the country, but scarce in town, making the cities repel population rather than attract it. Soldiers returned at the Armistice may have changed that.

GREAT CITIES OF BRITAIN

1. How many stand fairly on the coal fields?
2. What are the probable occupations of the people in these cities on the coal? (Mining is not so important as might be thought. Of the 19 millions "gainfully occupied" in the United Kingdom in 1922 only 1,220,000 were engaged in mining. The city dwellers are coal *users* rather than miners.)

3. Do you find nineteen British cities standing on the coast or near a river mouth?

4. What continent do these coast cities mainly face?

British trade before and after the War was in millions of pounds as follows:

		IMPORTS	EXPORTS
1913	Total trade.....	577	330
	Trade with Europe.....	324	201
1923	Total trade.....	712	467
	Trade with Europe.....	322	281

5. What percentages of imports and exports were European at the two dates? We must regard present trade as abnormal. Although British trade has increased by thirty per cent, the imports from Germany are only half what they were. How do the 1913 figures bear on question 4?

6. What cities stand neither on coal nor on the sea-coast?

7. What does the position of Ireland's cities suggest about the activities of men in them?

8. How many great cities on the Midlands coal field?

9. What four in Strathmore (the Scotch Lowlands)?

10. Now many on the Newcastle field?

11. How many on the South Wales coal field?

The manufacturing in the cities on the coal goes with the commerce of the coast cities, for the wares made in the coal cities are the same wares that are exported from the others and give England her lead in commerce. The facts of the map are unique. In sixty great cities, the United States has only Pittsburgh and Scranton on its coal fields, and Germany has a little swarm of nine of them on the coal field of the river Ruhr in the western part of the Empire, the most famous cities of the German Empire⁹ for their industry. But most of the great German cities are neither on the coal nor on the seacoast. England has been made greatest in industry and commerce by coal. That is why England had before the War 11 great cities to each 10 million people, Wales 10, Scotland 8½ and Ireland only 4½. England's nearest competitor in commerce and industry, Germany, had, as stated before, a single swarm of manufacturing cities about the Ruhr coal field, and but 7 great cities to ten million people; Prussia, the state that contains all the coal cities, had but 4 great cities to ten million people, it had so much purely rural life in the eastern part. Even the two districts of Westphalia and Rhineland, the purely local region of the industrial towns, had but 15 cities to ten million people, whereas Lancashire, York, and Durham, a comparable mass of people in England, had more than 20, without including several of England's most industrial neighborhoods.

⁹ One hardly knows what to call Germany. After a brief use of "The German Republic" the Germans themselves have gone back frankly to *Deutsches Reich*.

England's industry and commerce are founded on coal as no other land's industry is. Its basis in coal is nowhere approached in solidity.

BRITISH CITIES

When all cities down to 10,000 are included, the *swarms* of cities become very pronounced.

1. How many such swarms can you make out? One of these swarms has no relation to coal fields and is called the Basin of its principal city.

2. Which one is that? Quite as distinct as these swarms are the blank spaces between them. The *names* of British mountain ridges must now be learned. The most important, *because nearest to many men*, are the North Downs, the South Downs, the Chilterns, the Cotswolds and the Pennines.

3. Why is Wales so empty of cities?

4. What are the features of the landscape that so completely isolate the cities of the Newcastle coal field?

5. Why should northern and southern Scotland be so empty of cities?

6. Why has Cornwall so few?

7. Why has central Ireland no cities? A region that has not a single city as large as ten thousand inhabitants is certainly not agriculturally productive, so the real problem of geography here is to know why so little is produced in central Ireland.

8. There are four prominent coal fields in the Midlands group (Fig. 16). Does Fig. 17 show a tendency to bunch the cities in four groups too?

9. Which of the four divisions of the kingdom shows the most even distribution of the cities?

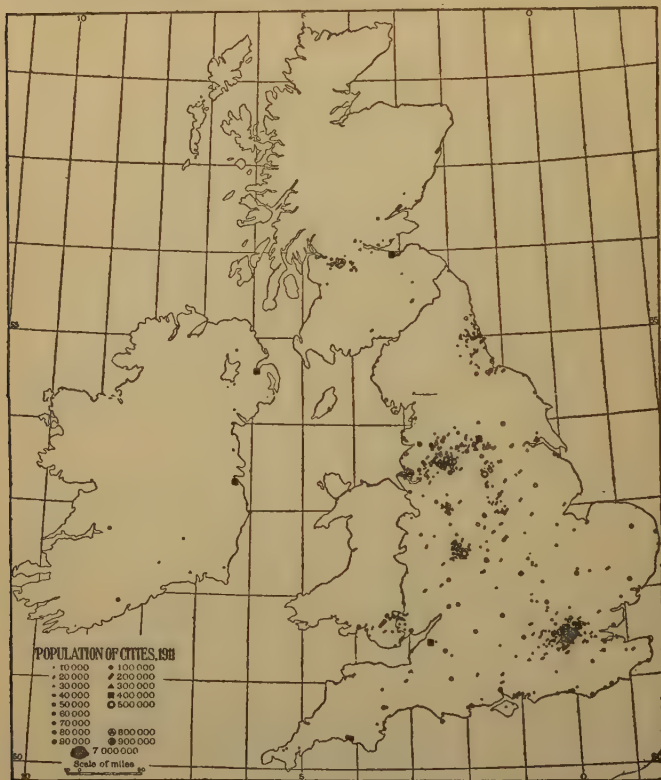


Fig. 17. The cities of the British Isles of 10,000 or more people. The size of the cities is indicated by both size and shape of the symbols that mark them. The omission of all names reveals the extraordinary absence of settlements from British Moors and Highlands.



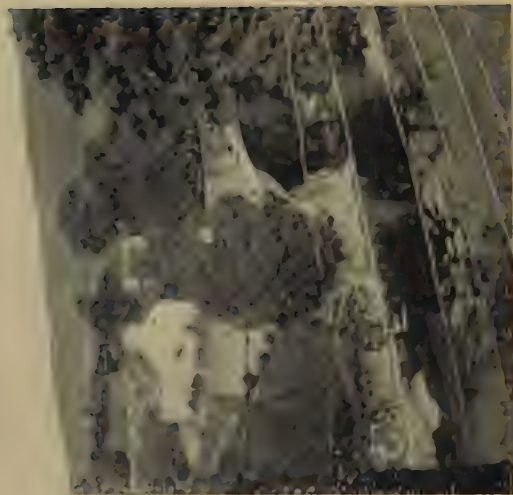
18. Placid mail route among Norse islands



19. Log cabins of planed lumber—Bergen



20. Cardiff's streets and harbor
Wales



21. Welsh house on rising upland

10. Was this equally true of the great cities (Fig. 22)?

The interpretation of an even distribution of small cities is that the region is one of high agricultural productivity, the cities serving as marketing and supply points. It is instructive to note that (in 1902) 32 per cent of England was arable land, 24 per cent of Ireland, 17 per cent of Scotland, and 15 per cent of Wales. It is important to realize that this arable land is scattered closely about the cities of Fig. 17. The cities grow out of farm life and are not *opposed to it*. Compare the distribution of plains on Fig. 14, where the plains are the white areas.

The position of London is striking. It is the greatest city in the world. Like all million-cities, it is situated centrally on a considerable plain. It also has unrivaled coal fields within a moderate distance in the Midlands, and is opposite, but separated from, the great north central plains of Europe.

11. Was the *separation* of value to England and London in the War?

12. Has it been of value in the past? Look up the matter in relation to the events of just a hundred years ago. (See *Geographical Review* for Nov., 1917.)

LIST OF EUROPEAN GREAT CITIES

Great Cities of Europe. The numbers indicate the thousands of people before and after the War. In column N is given the number of Great Cities for each country, in that headed P the number of hundreds of thousands of people in the country in question for each great city. Thus Switzerland has four million people and four great

cities, or one to each million people; that is, ten hundred thousand to each city.

SWITZERLAND, 1913-1920	N	P
Zürich, 205-207; Basel, 137-136; Geneva, 137-135; Bern, 95-104.	4	10

GREAT BRITAIN AND NORTHERN IRELAND, 1911-1921

Scotland—Glasgow, 784-1034; Edinburgh, 320-420; Dundee, 165-168; Aberdeen, 164-159.
Tyne—Newcastle, 267-275; South Shields, 109-117; Sunderland, 151-159; Middlesbrough, 120-131.

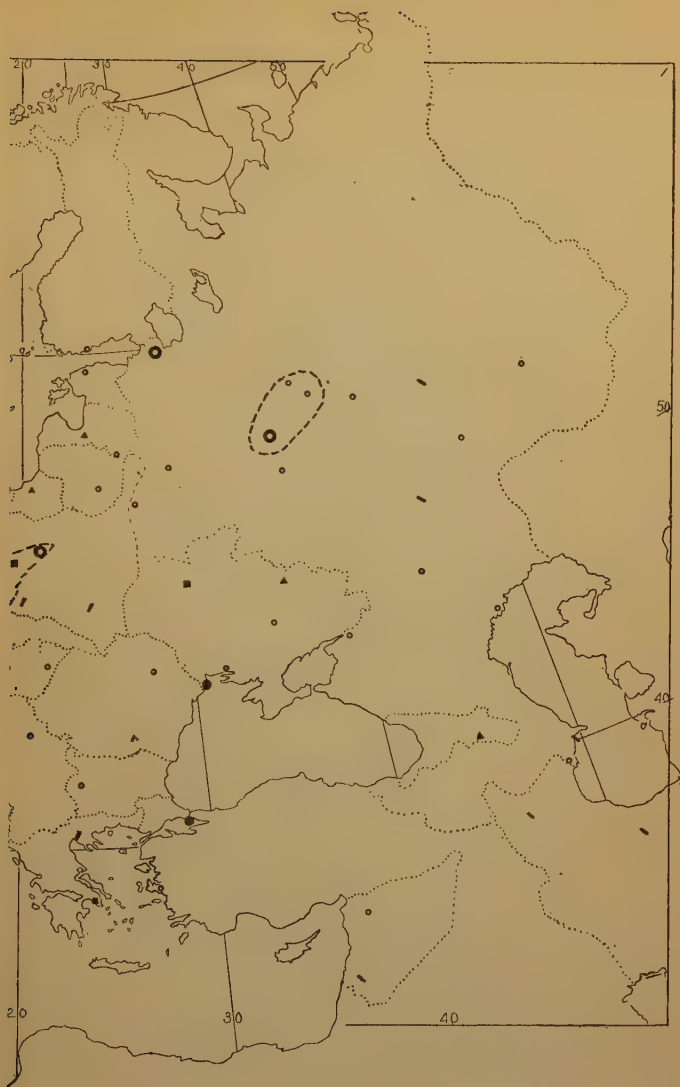
Midlands—Preston, 117-117; Blackburn, 133-127; Burnley, 107-103; Bradford, 288-286; Leeds, 454-458; Halifax, 101-99; Huddersfield, 108-110; Bolton, 181-179; Oldham, 147-145; Manchester*, 946-965; Stockport, 120-123; St. Helens, 97-103.

Central—Hull, 278-287; Sheffield, 460-491; Stoke-on-Trent, 235-240; Derby, 123-130; Nottingham, 260-263; Liverpool*, 1033-1116; Norwich, 121-121.

Black Country—Wolverhampton, 95-102; Birmingham, 840-919; Coventry, 106-128; Leicester, 227-234.

South Wales Region—Swansea, 144-158; Cardiff, 182-200; Bristol, 357-377.

Thames and Channel—London**, 7251-7476; Plymouth, 207-210; Southampton, 145-161;



ian 100,000 people). Industrial areas within broken lines
 is given by shape of symbols, key on right.

Thousands before and after War	N	P
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Portsmouth, 234-247; Brighton, 131-142.

<i>North Ireland</i> —Belfast, 387-425.	40	11
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GERMANY, 1910-1919

North—Bremen, 247-270; Hamburg*, 1104-1154;

Kiel, 212-214; Lübeck, 99-114; Stettin,

236-233; Königsberg, 246-261; Hannover,

302-393; Brunswick, 140-144; Magdeburg,

280-286; Berlin**, 2071-3804; Breslau, 512-528.

Ruhr—Hamborn, 102-110; Gelsenkirchen,

170-169; Bochum, 137-143; Dortmund, 214-295;

Duisburg, 229-244; Mülheim, 113-128; Essen,

295-439.

Rhine—Crefeld, 129-125; München-Gladbach,

66-107; Düsseldorf, 359-407; Elberfeld-Barmen,

339-332.

Central—Aachen, 156-146; Cologne, 517-641;

Cassel, 153-162; Halle, 181-183; Leipzig,

590-636; Dresden, 548-588; Erfurt, 111-130;

Plauen, 121-105; Chemnitz, 288-304.

South—Wiesbaden, 109-98; Mainz, 111-108;

Frankfort, 415-433; Mannheim, 194-230; Nürn-

berg, 333-360; Karlsruhe, 134-136; Stuttgart,

286-324; Augsburg, 102-155; Munich, 596-631.	40	15
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LATVIA, 1915-1922

Riga, 558-280 (Dwinsk = Düna- burg 110-45).	1	15
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NETHERLANDS, 1913-1922

Amsterdam, 595-696; Rotterdam, 459-532; The

Hague, 302-366; Utrecht, 124-146,	4	17
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Thousands before and after War	N	P
BELGIUM, 1912-1922		
Brussels, 614-783; Antwerp, 313-300; Liége, 171-165; Ghent, 168-164.	4	19
ITALY, 1914-1921 (<i>Communes, not cities</i>)		
<i>North of Apennines</i> —Turin, 415-502; Milan, 645-719; Brescia, 88-100; Padua, 103-112; Venice, 165-172; Trieste, (246)-238; Ferrara, 100-108; Bologna, 184-211.		
<i>West and Center</i> —Genoa, 292-316; Leghorn, 107-115; Florence, 240-254; Rome, 576-689.		
<i>South</i> —Naples, 692-772; Bari, 107-115; Taranto, ?-104; Messina, 126-176; Catania, 215-252; Palermo, 342-394.		
	18	20
SWEDEN, 1914-1922		
Stockholm, 382-425; Gothenburg, 178-228; Malmö, 96-115.	3	20
AUSTRIA, 1914-1923		
Vienna, 2150-1864; Graz, 156-153; Linz, 71-101	3	20
SPAIN, 1910-1922 (<i>Communes, not cities</i>)		
Bilbao, 93-115; Zaragoza, 112-144; Madrid, 600-764; Barcelona, 587-720; Valencia, 233-248; Seville, 158-209; Granada, 80-104; Murcia, 125-144; Cartagena, 102-97; Málaga, 136-153.	10	21
HUNGARY, 1910-1920		
Budapest, 880-929; Szeged, 118-119; Debreczen, 75-103.	3	23
FRANCE, 1911-1921		
Le Havre, 136-163; Rouen, 125-124; Roubaix,		

Thousands before and after War	N	P
122-113; Lille, 217-201; Paris, 2888-2907; Reims 115-77; Nancy, 113-120; Strasbourg, (179) 167; Nantes, 170-184; St. Etienne, 148-168; Lyons, 524-561; Bordeaux, 261-267; Toulouse, 150-175; Marseilles, 550-586; Toulon, 104-106; Nice, 143-156.	16	24
GREECE, 1913-1920		
Athens and Piraeus, 240-425; Salonica, 160-170.	2	25
NORWAY, 1910-1920		
Oslo (Kristiania), 241-258.	1	27
IRISH FREE STATE, 1911-1921		
Dublin, 403-398.	1	30
PORTUGAL, 1911-1921		
Lisbon, 435-486; Oporto, 194-203.	2	30
FINLAND, 1911-1921		
Helsingfors, 154-200.	1	34
DENMARK, 1911-1921		
Copenhagen, 559-701.	1	34
POLAND, 1910-1921		
Poznan (Posen), 157-170; Warsaw, 872-936; Lodz, 415-452; Cracow, 171-182; Lwow (Lemberg), 212-219; NOT Wilno.	5	48
ESTONIA, 1910-1922		
Reval, 99-123.	1	50
LITHUANIA, 1914-1922		
Vilna, 215-129 (Poland claims and occupies as <i>Wilno</i>).	1	50

Thousands before and after War	N	P
BULGARIA, 1910-1920		
Sofia, 103-154.	1	50
SERB, CROAT, SLOVENE STATE, 1911-1919		
Belgrade, 91-112; Agram (Zagreb), 79-108.	2	55
RUSSIA, 1912-1923 (The name Russia forbidden May, 1925. The official title is now <i>The Union of Soviet Socialist Republics</i>)		
Leningrad (1924 name for Petrograd-St. Petersburg), 2074-1067, Yaroslavl, 112-?; Ivanovo, 168-?; Nizhni-Novgorod, 109-?; Kazan, 195-?; Samara, 146-?; Ufa, 103-?; Moscow, 1780-1543; Saratov, 217-?; Vitebsk, 104-?; Tula, 137-?; Minsk, 105-?; Tsaritzyn, 101-?; Astrakhan, 150-?; Kiev, 594-404; Kharkov, 258-?; Yekaterinoslav, 112-?; Odessa, 631-?; Nikolayev, 103-?; Rostov, 172-?; Tiflis, 303-?; Baku, 206-?; Saliany, 121-?.	23	57
CHECO-SLOVAKIA, 1914-1921		
Prague, 541-677; Brunn, 132-222.	2	68
RUMANIA, 1914-1917		
Bucharest, 346-309; Chisinau (Russian <i>Kishinew</i>), 125-114.	2	85
NO COUNTRY THAT BELONGS, 1910-1924		
Danzig, (170)-207 (one unit customs district with Poland, but only six per cent of people are Poles).		
Starred cities are composite. It is always difficult to determine just what people to include in counting the		

population of a city. In the course of their growth cities grow up to and around smaller cities or suburbs which may preserve a government of their own long after they have become actual parts of the great city. For geographic purposes the city is the whole continuous area occupied by city buildings, streets, and parks. No suburbs that are separated by farms or open country should be included, nor should any integral part of the city be omitted because of separate governments. Greater London, the city enumerated here, *does* include separate outside places. An investigation in 1909 ¹⁰ showed that a million and a quarter people were so included in 1901, "Greater London" having then 6,581,402 while the continuous city contained but 5,327,000. It is probable the really continuous city London today contains not over six million people. Greater Berlin likewise contains six forests, many fields, and over twenty-five separate towns and villages out in open country besides Charlottenburg, Neukölln, and other cities, essentially one city with Berlin. The population given is too large, though there is no means of knowing how much. Manchester includes Salford, Liverpool includes Birkenhead, Bootle,¹¹ and Wallasey, Hamburg is one with Altona, and Athens and Piraeus though separate have always been counted as one city. At present Piraeus is swelled to a size not properly belonging to it by refugees, driven out of Turkey.

¹⁰ *Anthropography of Some Great Cities*, Bull. American Geographical Society, Sept., 1909.

¹¹ It is characteristic of British landlordism that one man owns all the land in Bootle.

TOTALS OF COUNTRIES

	N	P		N	P		N	P
Switzerland.....	4	10	Hungary.....	3	23	Lithuania	1	50
Great Britain.....	40	11	France.....	16	24	Bulgaria	1	50
Germany.....	40	15	Greece.....	2	25	Serb-Croat-		
Latvia.....	1	15	Norway.....	1	27	Slovene		
Netherlands.....	4	17	Irish F. S.....	1	30	State .	2	55
Belgium.....	4	19	Portugal.....	2	30	Russia..	23	57
Italy.....	18	20	Finland.....	1	34	Checo-		
Austria.....	3	20	Denmark.....	1	34	Slovakia.	2	68
Sweden.....	3	20	Poland.....	5	48	Rumania	2	85
Spain.....	10	21	Estonia.....	1	50			

In 1800 the only million-city in all the world was London. The only great cities—100,000 people and upward—were: London, Dublin, Paris, Lyons, Marseilles, Berlin, Hamburg, Vienna, St. Petersburg, Moscow, Warsaw, Copenhagen, Madrid, Barcelona, Lisbon, Naples, Milan, Rome, Palermo, Venice, and Amsterdam, in all twenty-one. Seventeen of these have now over half a million people and eight of them are in the million class. Since then has come the Age of Steam and Machines to add the 171 newer cities listed on pages 61 to 66.

CHAPTER IV

WEALTH

Before the War Europe was the important grain-producer. Even without Russia it produced more than the United States and with Russia almost twice as much.¹

Most of us were not aware of that. We thought the United States was the great producer. We knew we had enormous crops, larger than any other country we had heard of. Take the crops of 1913 for instance. We produced 4,551,000,000 bushels of all grains. The biggest country in Europe only produced 3,546,000,000, three and a half billions to our four and a half! Germany only produced a billion and a half bushels (1,490,000,000) and France and the United Kingdom a billion between them (719+308 millions).

But none of these countries is anything like as large as the United States. It is not fair to expect them to produce as much grain. We have 179 times as much territory as Belgium, and Belgium could not possibly raise as much grain as we can. Russia in Europe, too, is only three-quarters as large of area as the United States.² To be fair we ought to take three-quarters of our crop—3,413,-

¹ 1913 Grain is wheat, oats, barley, rye, and corn,

	Product	Area
Russia.....	3546 million bu.	210 million acres
Other Europe.....	5107 " "	183 " "
Europe.....	8653 " "	393 " "
United States.....	4551 " "	204 " "

² 2,276,000 to 2,794,000 square miles.

000,000 bushels—to compare with Russia's 3,545,000,000, and multiply Belgium's crop by 179. A simpler method of comparing countries fairly is to divide the product by the whole area of the country. The result is the proportion of crop for one square mile of country. If we do that for the crop of 1913 we find that for each square mile of territory in 1913 the United States produced 1531 bushels of grain, and Europe 2307, or more than half as much again. Russia produced 1558, the United Kingdom 2541, France 3610, Denmark 6095, and Germany 7130. Only the rocky north, in Finland, Sweden, and Norway, where soil for crops was too often lacking, or half-arid Spain, and Portugal, whose fields were not well worked, produced less on this *proportionate* showing than the United States.

In 1909 there were only six important articles out of the eighteen chief vegetable and mineral products of which the United States was more productive than Europe: cotton, corn, petroleum, gold, copper, and silver. In all others Europe produced more than all North America. An attempt to put value (but *New York* value) on the goods for 1909 gave Europe \$2770³ worth of these staples for each square mile and North America \$774.⁴

Of course we have much more waste land than Europe. One of Europe's distinctions among the continents is that it has less waste land than any other. That is what gives it a productiveness that is so high to the square mile of area. Norway doesn't make a good showing to the square

³ But the per-capita products were \$59 for the United States, \$78 for Canada to \$23 for United Kingdom, \$26 for France, and \$32 for Germany.

⁴ The other twelve staples were potatoes, wheat, rye, oats, barley, sugar, wool, rice, coal, iron, lead, and zinc.

mile. With such enormous waste expanses on the Fjell and so little workable soil, it is impossible for her.

But after all it is the people that we account important in geography. What matter if there are waste places if the people in the country can supply themselves adequately? When we come to products *per capita* we find things different. A square mile of European territory might produce well-nigh four times as much as a mile of America, but the share of the value for the eighteen substances studied for each individual on the continent was \$22 for Europe and \$42 for North America. The grain crop of Europe for 1913 amounted to 19 bushels per capita, that of the United States 47.⁵ There is great variety; less than 7 bushels per capita for the United Kingdom, 18 for France, 22 for Germany, over 24 for Russia, and 33 for Denmark. Of course our population is thin. The Europeans outnumber us four to one, so our crop is to be divided among fewer people. These differences in supply made it possible, almost necessary, to send grain from our country and others in the new world to Europe. A country producing 47 bushels per capita is bound to send some to a country producing only 19 if there is any means of making the exchange.

If we assume that the exports of grain from North and South America, from India, Australia, and South Africa all go to Europe, the addition of their amount to the European production should give the total that Europe disposes of for food and other consumption, the quantity stated for the before-the-War period at the foot of Fig. 23.

⁵ In individual consumption that would amount to $2\frac{1}{2}$ pounds of grain a day in Europe and $6\frac{1}{2}$ pounds in the United States.

In 1913 this importation was 904 million bushels, bringing the grain available for each individual to 21 bushels.

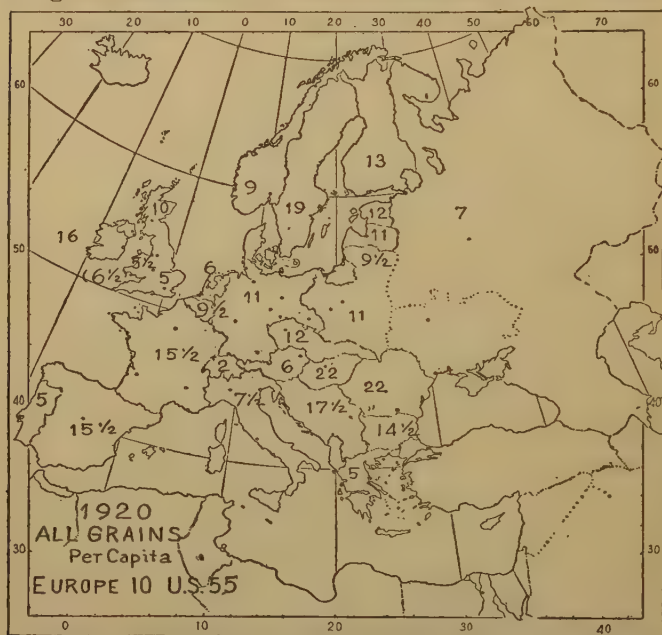
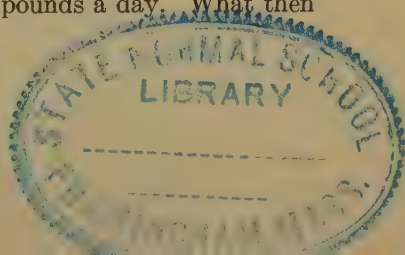


Fig. 23. Production of all Grain—wheat, oats, rye, barley, corn—per capita bushels for 1920. Dot after number means $\frac{1}{2}$. The pre-war consumption of the same grains for the average year between 1909 and 1913 was:

U.S.		U.K.	Neth.	It.	Ger.	Fr.	Belg.	A.H.
6.3	wheat	6.1	4.5	6.7	3.4	9	8.8	4.4
11.8	oats	5.5	4.3	1.3	9	8.5	6.5	4.7
0.4	rye	0.1	4.6	0.2	6.4	1.3	3.6	3.2
1.9	barley	2.1	2.6	0.3	4.5	1.3	2.7	2.5
28.4	corn	1.8	3.4	3.3	0.5	1	2.4	4.4
48.8		15.6	19.4	11.8	23.8	21.1	24	19.2

Probably the consumption of grain as figured by the U. S. Department of Agriculture means the product of the country, plus the importations, minus the exportations. In what sense is this *consumed*? One thinks of it at first as used by the people for food, that is as bread-stuff, what Europeans call *corn*, this word that means *wheat* in England, but *oats* in Scotland. Practically the same word *korn* means *rye* in Germany and *barley* in Scandinavia. In other words whatever grain is locally used for bread is *corn*. It would seem as if there must have been a period in the colonizing of the United States when our maize (*Indian corn*) was so generally used as the bread-stuff that we adopted it for our local meaning of the word. The Corn laws that figure in English history were really Wheat laws. An Englishman invites you to see his cornfield much to your surprise. You thought they didn't grow any corn in England. But when you see it, it is wheat! These varying uses of grain for bread come out in the table under Fig. 23. France and Belgium, followed by Italy and England, have a high consumption of wheat. Italy's *polenta*, much used by the poorest classes, accounts for her considerable use of maize, while the rye bread of Germany and Austria-Hungary is in evidence. There is an item in the German consumption that suggests the brewing of beer. Other grains too may be used in distillation. The oats may well go to feed horses, though the Swedes and Scotch make much use of them as human food. Rather extraordinary is the American consumption of maize. Truly a European would say we must all eat corn bread! But 28 bushels per capita is too much. It is three or four pounds a day. What then



becomes of it? Apparently we "consume" a good deal of it by feeding it to our sixty million hogs, and send much of it to Europe as bacon, pork, and lard, 1536 million pounds of pork in 1920 and 612 million pounds of lard. Apparently some forty-odd bushels of corn may go into the upbuilding of one hog. That item in our "consumption" is something like sending raw material to a factory and exporting the finished product. The rye of Netherlands, distilled with barley malt to make Hollands gin and exported widely, figures too in Dutch "consumption." Probably the direct consumption as human food amounts to about 10 or 12 bushels per capita.

But the War has greatly lowered Europe's rank as a grain producer. She has diminished her acreage in grain, her crop of grain, and her yield per acre. We can compare only Europe⁶ other than Russia, as we have no reports under the new régime in that country. The figures for 1921 and 1922 are substantially the same. In western Europe fifteen million acres have gone out of cultivation, the grain harvested is about two-thirds what it was before the War, the yield has fallen off seven bushels per acre, the yield per capita has diminished by 2.7 bushels, and the crop per square mile of country is now less than in the United States. These are the bushels of the 1920 crop per square mile of country:

⁶ Grain Production in Europe (except Russia)

	Millions of acres bushels		Bushels per acre p. cap.		Bushels p. s. m. country
1913.....	183	5107	28	16	3464
1920.....	168	3524	21	13.3	1862
1924.....	189	4223	22		

	United King- dom	France	Germany	Denmark
1913	2541	3610	7130	6095
1920	2512	2826	3776	5789
1923	2746	3318	4910	7236

England and Wales did better and raised their crop from 3190 to 3269, Scotland from 1548 to 1681, but Ireland fell back from 2007 to 1910; 1923 values were 3298, 1746 and 1981. In Germany and France, of course, we get the grain now produced on the present area per square mile of that area, so the changes in boundaries do not affect the results except so far as the gained or lost territory is better grain land than the average of the country. Both France and Germany have fallen off very seriously as grain producers.

MILLION ACRES OF LAND IN GRAIN

	France	Germany
1921	26.4	24.8
1922	26.2	24.4
1923	26.9	25.7
1924	26.6	26.4

At the same time the United States has increased its grain-growing activity in every direction,⁷ leading Europe in area under grain, in total crop, in yield per acre as well as per capita, and in product in proportion to the size of the country.

The variety of causes that have brought about the

⁷ Grain Production in United States.

	Millions of		Bushels		Bushels
	acres	bushels	per acre	p. cap.	p. s. m. country
1913.....	204	4551	22	47	1533
1920.....	217	5787	27	55	1950
1923.....	218	5418	25	48	1822

present backward condition of agriculture, especially in Germany and France—lack of farm animals, lack of fertilizer, and in general lack of capital for proper conduct of the farms, and in places war damage to the soil—all lead back to the War.

We have no reliable statistics from Russia that enable us to form a clear idea of what is happening there. We know that a new system of labor has been put in place of the old economic system with disorder and suffering among many classes of the people. We know that Russia has no surplus of grain to sell as she once had and asks charity from outside nations to prevent Russians from dying of starvation in great numbers. No good evidence is offered us that the general mass of the people are more contented than formerly. It is well known that the peasants were badly off under the old régime. It appears to be beyond a doubt that work, cheerful, assiduous work, the thing that has made Europe the world leader she is, is not being done in Russia today, whether the workers lack opportunity to work or whether the will to work is lacking. Effective work is not now being done in Russian grain fields, not so effective as was done under the tsars. The true figure for Russia in Fig. 23 must certainly be a low one. As Russia is not able to feed herself, it is likely her per capita yield is well under 10, though formerly 24.⁸

⁸ The proportionate yields per square mile of country for 1920 were as follows. It will be worth while to enter them on a blank map and study the distribution of high and low values: U. K. 2512, Fr. 2826, Ger. 3776, Neth. 3520, Belg. 6455, Den. 5789, Pol. 1773, Ch-Sl. 3074, Finl. 293, Nor. 176, Swed. 653, Swit. 437, Sp. 1656, Port. 817, It. 2249, Austr. 1057, Hung. 4900, Yugos. 1927, Bulg. 1738, Rum. 3066.

1. What country produces most grain per capita? What does per capita mean? For the same country the product was 33 bushels in 1913.

2. That country had 17 bushels of oats and 8 bushels of barley per capita among its grains. What did they do with each?

3. What country produced least grain per capita? May it have also produced the smallest total crop? Explain your answer.

4. Which part of the British Isles produced most? What does it mean? That it is the most prosperous part of the Islands?

5. What is the average value for Europe?

6. Some Mediterranean countries may have to buy bread grain. Name them.

7. Have they any widespread regional product to give in exchange? Look up in the *Statesman's Yearbook* exports common to a number of them.

8. Do you imagine Europeans may have a choice between farm work and factory work? Which would they prefer? Is their choice likely to depend on their knowledge?

9. What countries may have a low per capita figure because of preference of factory work? Explain.

10. In the industrial region of Fig. 22 how do the values of Fig. 23 run? Above or below the average?

11. Do the physical provinces explain the differences between Norway and Sweden on this map?

12. Might the great development of seed and flower growing in Netherlands affect the figures of this map? How? Compare the case of Belgium.

13. How do the English and Swiss get money to buy bread? Is it a good expression to say they cannot raise their own bread? The phrase implies that they wish they could!

PER CAPITA WEALTH OF COUNTRIES

Fig. 24 is roughly illustrative of before-the-War conditions. What do we mean by a rich country? Is it a country of more aggregate wealth, whether the people be few or many, or the one where the average citizen has more goods? From our point of view it is better to call a country rich when its citizens are rich and poor, when they have little individual wealth, though they may be numerous enough to enable their government to dispose of vast sums of money. The tax assessors count up the value of everything in a country—lands, improvements, buildings, machines, tools, animals, minerals, crops, wares, and shares in property in distant lands. In 1910 the total value of all property in the state of Michigan was about 4860 millions of dollars, of Texas 5854 millions. There were 3.9 millions of people in Texas and 2.8 millions in Michigan. Dividing by the number of citizens, we get the per capita wealth of the two states—\$1501 for Texas and \$1731 for Michigan. If both levy taxes at the same rate Texas can collect more money from its citizens. Its government is richer. But the average individual in Michigan has a little more property. When we think of a state as a group of people we call Michigan richer. That is our geographic point of view, not the only one, not the best one, necessarily, but the geographic one. These are the values shown on Fig. 24.

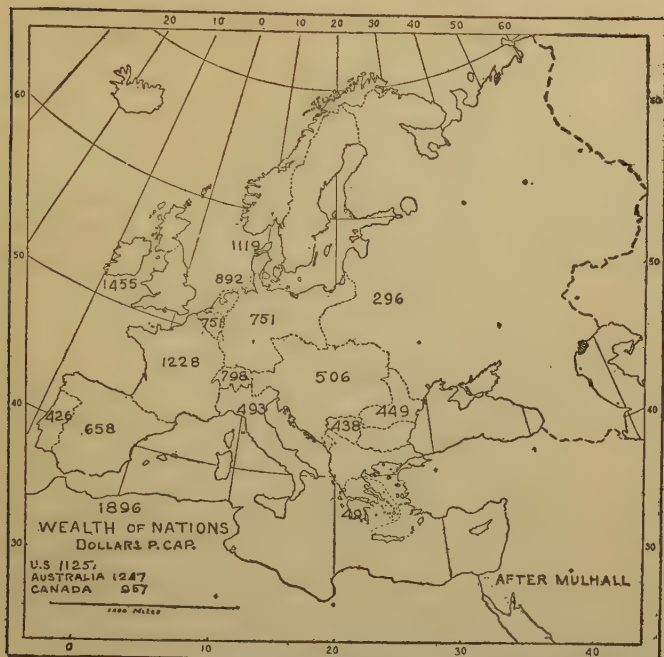


Fig. 24. Wealth of Nations as estimated by Mulhall in 1896 in dollars per capita.

1. Are the Mediterranean countries rich or poor?
2. Are eastern or western European countries richer?
3. Which European sea has the richer people round its shores?
4. How many exceptions do you find to the rule that the western of two neighbor countries is the richer?
5. Is it a rule?

6. After looking over the map, make an estimate of the probable wealth of Bulgaria.

7. On the same basis estimate the wealth of Checo-Slovakia and Hungary.

8. Is there probably more ownership of things in foreign countries in England or in France? in Holland or in Belgium? Why?

9. Are the more enlightened countries generally richer than the others? Consult Fig. 42 for a rating of the countries in culture.

10. Are the British richer than the French?

The figure allows but one answer, but the question brings up the significance of evenness of distribution of wealth. In France property is relatively evenly divided, in Britain very unevenly. In Great Britain, with 89,000 square miles of territory, 54,408 individuals held all the agricultural land. That gave them an average of 853 acres apiece, one and two-thirds square miles, not a bad-sized farm for little England! Vastly the greater part of the 38 millions of people then living in Great Britain had no land at all. Yet the local authorities have power to obtain a few acres for any agricultural laborer who applies to them for it and finance its purchase for him. Of course England is a manufacturing country and factory hands do not need to own land. Can it be that a great development of manufacturing industry in a country has the effect of driving the people from ownership of the land? That cannot be asserted. But British industry exists and has long existed beside an extremely wealthy landed class.

In France—then 207,000 square miles in area—there were *four million* landowners! It seems incredible that

there should be such differences in countries so near and so similarly situated. Of course they are small owners—numerous owners must always be small owners. The size of France allows them thirty-two acres apiece. Of course these are not sizes of farm lands. We are taking all the land of the country, good and bad, plow-land and waste land, but it is all *owned*. Hardly four or five acres to a farm of farm lands, it happens in France. French land ownership is paralleled by business ownership. Small French business resists absorption by Big Business successfully. French fortunes are less uneven. Here is something of essential contrast between French and British. We raised the question once what would happen if the French and British people attempted to exchange territories. What would these millions of land-owning Frenchmen do if thrust into a landless condition in other-owned Britain? How would the landless British millions behave with their tiny French farms?

France with very few great fortunes had relatively few of the wretched or dependent. Britain had a considerable group of extremely wealthy men and a mass of wretchedly poor and paupers. Money could be raised in England for a large and promising undertaking by a moderate number of people investing large sums—almost equally well in France but in a very large number of small sums. It is well known that at the close of the war of 1870, when the Germans demanded a large indemnity from France, mentioning that German troops would stay in occupation till it was all paid, the French peasants went down into the old stockings that contained their hoards and astonished the Germans by paying the whole sum at once.

Russia was a poor country and its wealth most unevenly distributed. A small class of nobles and landowners enjoyed great wealth while the mass of the people could barely exist.

In general a land system that gave a nobility all the land, depriving the mass of the people of any share of it, made the agricultural workers semi-slaves or serfs. The system prevailed in central and eastern Europe. The nobility was usually extravagant and idle and the per capita wealth of the country low. A visitor to a country sees people and meets people. But what people? All the people? A selection of the sort of people who most abound? Of course not, and his report is as valuable as the blind men's verdict on the elephant. We ought to meet "typical" people, some one will say. Did you ever attempt to pick out something typical? Say a typical house of some small town you are familiar with. "Typical" examples of dwellings or costumes or implements used in foreign lands abound in book and magazine illustrations, and the most friendly thing to say of them is that they were usually taken by a photographer who was well trained in his art—of making photographs! A type is very difficult to select. Of course there should be more examples like it than unlike it, but very few "typical" pictures would stand that test. Oftentimes something unusual or freakish seems to have been picked out, with some notion that common ones were not typical. The typical would be commonplace anywhere, and the same is true of impressions of foreign peoples. We are sensitive to novel impressions. A visit to a country is no guarantee of knowledge of the condition of its people.

How much greater the wealth of the Balkans than of Russia! Yet in the Balkans a wealthy society was almost unknown. In the Balkans is individual ownership of small properties. Serbia guarantees every citizen his sixteen acres of land. The small property may take the collective form of a *Zadruga* of from twenty to seventy individual peasants holding collectively, but the individual average is small. Wealth is not only more evenly divided than in Russia but greater. Ignorance is great. Methods are bad. Standards are low. A long enslavement under Turkey was no good preparation for self-government, but the individual holdings are far better for the mass of the people than class holdings by more intelligent people. The superior education of an upper class has never been found to include a training in unselfish devotion to the interests of others which could be counted on to secure anything at all to the "masses." We have had the contrast pointed out between Serbia and the lands under Austria just to the west where the people were identical but governed by intelligent Austrian officials. How delightful to travel in Bosnia, where the Austrians had built good roads and clean comfortable inns for the traveler. In Serbia the roads were mere trails, the inns dirty and infested with vermin. We cannot choose but prefer the land where the autocrat ruled, but the peasant did not! Roads mattered little to him. He had no automobile. He traveled on foot or on a horse. His inn provided all he needed, cost little, and the vermin didn't trouble him. What gain to give him things he didn't want when he was deprived of the chance to rule his own affairs, which he did want more than anything in the world? Education was and is the only way

to change his standards and bring him other wants and their fulfillment.

In Denmark the peasants own the land and are universally educated. They construct for themselves good roads and keep their houses clean and incidentally rule the country.

The inequality of land division in England had been perfectly matched in France before the Revolution. "With the working people, again, it is not so well. Unlucky! For there are from twenty to twenty-five millions of them. Whom, however, we lump together into a kind of dim, compendious unity, . . . as the 'masses.'"⁹ Masses that rose up in Paris and throughout France, wreaked vengeance on every aristocrat in sight, burned châteaux and, proclaiming as the fundamental law of France "Liberty, Equality, and Brotherhood," *divided the land*.

The peasants got the land and they have it still, but it was the town working class who got it for them. Once the thing was started the peasants helped plunder, helped burn and kill, or did all these things by themselves, but it was the town workers who had tasted enough freedom from the serf's life on the land another owned to know how to start it. While the other kings and aristocrats of Europe were combining to undo the work of the revolution the plain people of England were developing the steam engine and its application to spinning and weaving. The struggle on the continent lasted from 1796 to 1815. "It is a striking fact that through the period of the Napoleonic wars, when French armies entered every town in Belgium, Holland, and northern Germany, the Channel and the

⁹ Carlyle, *French Revolution*, 1, 29.

English fleet kept England uninvaded, precisely in the years when the mechanical improvements in spinning and weaving and the invention of the steam engine and the locomotive introduced the industrial revolution. For these inventions all European industry was ripe, but only England had peace and tranquillity at home to develop them.”¹⁰

This was the basis of the expansion of British trade and British empire. The French got the land and the British got industrial occupations off the land that suited them better than farm labor. France and the continent have been learning the methods of British Industry ever since, but British lands are still badly divided and so is British wealth. The agricultural laborer in Britain is an almost hopeless being. The bottom stratum of the factory workers is infinitely debased and wretched, besotted with drink, drunkenness being, as Patrick Geddes said, “the shortest way out of Glasgow.” But industrial labor gave Englishmen opportunities that farm labor never could offer them. Industrial workers thrived and shared no little in the wealth of the Empire. Land well divided gives all men a chance to keep alive in independence. It is the bulwark of the humble man’s liberty. Industry gives the unusual man a chance to win a fortune. It is the opportunity of the brilliant.

The wealth of a people is a difficult matter to measure; still more difficult to appreciate is its significance for their happiness or for their contentment.

But we cannot miss its relation to freedom of the masses and a westerly situation in Europe.

¹⁰ *Geographical Review*, Nov., 1917, p. 387.

COAL THE BASIS OF INDUSTRY

Industry has always been localized in England and on the continent as well by the situation of the coal fields. (See page 56.)

In her carrying trade, too, England has been well served by abundant coal. Mainly she has to export manufactured goods of little bulk in comparison with the raw materials she has to import—lumber, grain, hides, and meat. Without coal her ships must have gone outward lightly laden, putting the main cost of the outward as well as of the homeward journey on the goods brought back.

1. What are the countries in Europe that produce coal?
2. Which three appear to lead?
3. One group of deposits lies along the denser population of Fig. 9. Through what countries can you trace this line of coal deposits?
4. Do the coal deposits correspond in position with the industrial region of Fig. 22?
5. What coal areas lie outside?
6. Generally speaking, is there coal in the Mediterranean Ridge province?
7. Does coal occur in Europe's high mountain ranges?
8. What physical province has most coal?
9. Make a diagram of the coal extraction of 1920, putting black symbols on a copy of the blank map of Europe from the following data of millions of tons: U. K. 233, Fr. 22, Belg. 19, Neth. 5, Ger. 210, Pol. 6, Ch. S. 27, Swed. 0.4, Sp. 4, It. 1, Aust. 2, Yugo S. $21\frac{1}{2}$, Rum. 3. Use solid circles $\frac{1}{20}$, $\frac{1}{10}$ and $\frac{1}{5}$ inch in diameter for 1, 10, and 100 million tons value and for 50 millions a

circle 0.15 inch diameter with a white center .07 inch across. Put these symbols and combinations of symbols in the places indicated by Fig. 25.



Fig. 25. Larger Coal deposits of Europe. (Details for Britain, Fig. 16. For France, Bowman's *New World*, page 89.)

10. The coal of Spain is exploited by foreigners, utilizing Spanish labor to some extent. Does that illustrate De la Blache's doctrine? (See page 6.)

11. Most of the coal occurs where the most enterprising people in Europe live. What does that suggest if we just associate thoughts without much study? However, those

people had already shown themselves the most progressive of the continent before coal was used in factories. (When was that?) Does that modify our conclusion? How?

12. Do you know what white coal is? Something as lasting as coal is fleeting—one estimate has it that in two centuries all our coal will have been burned up—something really indestructible and yet able to do the work coal now does.

Coal enables a country to occupy profitably in factories a greater number of men than can be used on the farms; and most men who know about it prefer factory work to farm work. For one thing the hours are fixed and short and the conditions of labor are regulated by law and inspection as farm labor has never been. Coal therefore increases the visible wealth in a country, the wealth that can be taxed, so that governments can obtain a larger revenue without causing the people to feel oppressed very much. As long as nations wish to be able to wage war, coal within one's own boundaries is desirable to supply factories of arms and ammunition and yards for construction of warships and fuel to drive the ships. Thus it is regarded as a most important source of national wealth. A better fuel for ships is petroleum, especially as it is less bulky and a ship can carry oil fuel for a longer voyage than she possibly could coal, increasing her "cruising radius." Furthermore there is the gasoline derived from crude petroleum which is now so necessary to drive motor trucks on land. European nations have little petroleum—two-thirds of the supply comes at present from the United States—so European nations are searching the world over for possible petroleum wells. In 1919 Russia between the

Black Sea and the Caspian produced 4 million metric tons, Rumania 0.9 million, and Poland 0.8 million. No other European country produced even as much as 50,000 tons, while 50 million tons came from the United States.

The merit of the estimate of the wealth of nations in Fig. 24 is that it was made by one man for a number of countries on one same plan. Since then—even before the War—values must have changed. Germany for one thing must have made gains. Careful computations for a few countries at more recent date give: Sweden ('08), \$407; United Kingdom, \$1972; France, \$2027; Germany, \$920; Russia ('10), \$409; United States ('12), \$1909. That would make France the richest country in the world. Since the War one can only say everything is unsettled. Expenditures during the War in per capita form were: U. K., \$695; France, \$911; Germany, \$634; Italy, \$347; and the United States, \$129. But the costs of the War have fallen on different peoples in different ways. In England the well-to-do classes have had most of their income taken from them in taxes. On the continent depreciation of the currency has destroyed the property of the classes who had saved and invested money in Russia, Austria, Germany, and Poland, and greatly reduced it in France and other countries. Fig. 26 shows how this affected different countries on February 20, 1923. It gives the income from a million dollars, American money, invested in those countries sometime in 1913. The income would really be the same number of marks, or francs, or pounds, that was paid as interest in 1913 when their money was good, but because their currency has depreciated the sums when turned into American money are now enor-

mously reduced, not so bad in Sweden, where you would get \$58,800 a year, badly reduced in France, where you would have but \$19,200, but quite intolerable in Germany, where you would get only \$13 a year. In Russia it isn't certain that you would get anything. Life insurance within a European country, paid for before the War, would suffer the same reduction. On your death your heirs get the sum agreed upon, say 20,000 marks, but the mark is worth so little they would seem to get nothing at all. Or you loaned thousands of dollars on a mortgage, and not merely is the interest ridiculously small, but a few dollars' worth of real money cancels your loan. Germany, Austria, Poland, and Russia were not rich and the wealth of the middle and upper class invested in bonds, mortgages, and other securities to give a safe, secure income has been practically destroyed by the depreciation of their money. War loans were raised in Germany by selling war bonds just as Liberty and Victory bonds were sold in the United States, but the interest coupons are of course paid in marks, and what can the owners get for them? The investor has lost his money.

1. What five countries had their money so depreciated as to be worth practically nothing?

2. What countries had their money depreciated to less than a fourth its value? (\$60,000 divided by 4 is \$15,000).

3. How is it we can get along all right with paper money in the United States?

4. What five countries have money that is fairly good?

5. Do you know why Greece has its money so much more depreciated than Yugoslavia?



Fig. 26. Income in dollars at the exchange rate for Feb. 20, 1923, from a million dollars invested in European countries in 1913, showing how depreciated money has taken away the property of those who lived on income from investments.

6. Why should the money of Portugal be depreciated?

7. Why has Norwegian money fallen in value?

A paper dollar is handier to use than a gold one, a five-dollar bill than a five-dollar gold piece, *as long as you can buy as much with it*, as you can with us. And it buys as much as gold as long as we can readily exchange it for

gold at the banks. In war time governments need more money than they can lay hands on, so they issue more bills from their printing presses than they have gold to exchange for. Then gold goes up, that is, people who have to buy gold to pay for purchases in foreign countries go to those who have it to sell and the sellers quickly perceive that the banks won't give gold for paper and the buyers have to make them offers of higher and higher prices for their gold. Instead of getting an American gold dollar in Germany for about four marks the Germans had to pay five and then six and ten and twenty and finally thousands of marks. As the premium on gold goes up prices go up until a mark or a crown or a ruble will buy almost nothing at all. The depreciation of those currencies is a measure of the misfortune of an important class of the people and a constant demoralization of business. An absolute present need in Europe is the stabilizing of the currencies. The only way to do this appears to be:

To stop the issue of paper money except at a fixed ratio to the amount of gold possessed.

To use rigorous economy in the government.

To obtain a loan of gold from some outsiders who are given security for their gold and some hand in managing the finances of the country.

This has been done for Austria, and is the substance of the Dawes plan to which the German Reichstag assented for Germany August 29, 1924.

The repudiation of the foreign debt of Russia by the Soviet government causes great loss in France, where large numbers had invested in Russian bonds in order to help an ally of their country.

THE MONEYS OF EUROPE

One-half the twenty-nine countries of Europe use the same coin, the franc of the French, though with some local names. The four Scandinavian countries, who have at one time or another had various sorts of unions, but have not been able to stay united, still keep a common crown and so do the three chief fragments of the old Austria-Hungary, but with a different value from the Scandinavian crown. The Irish Free State has kept the English shilling and pound. The five remaining countries have each a coin of its own. The names and par values of these coins in U. S. dollars follow:

France	franc	\$0.1929	Norway	crown	\$0.2704
Belgium	franc	.1929	Sweden	crown	.2704
Switzerland	franc	.1929	Denmark	crown	.2704
Italy	lira	.1929	Iceland	crown	.2704
Greece ¹¹	drachma	.1929	Austria	crown	.2028
Spain	peseta	.1929	Hungary	crown	.2028
Yugoslavia	dinar	.1929	Checo-Slovakia	crown	.2028
Rumania	leu	.1929	Gt. Britain	shilling	.2433
Bulgaria	leva	.1929	Irish Free		
Poland	zloty	.1929	State	shilling	.2433
Latvia	lat	.1929	Portugal	milreis	1.04
Estonia	mark	.1929	Netherlands	guilder	.396
Finland	markka	.1929	Germany	mark	.2382
Albania	franc	.1929	Lithuania	litar	.10
Turkey	piaster	.0440	Russia	ruble	.5144

It must be a gain to the thirteen countries that use the franc to have the same money, though probably all have more business with England than with France, for business is apt to go where it can get what it wants. It is not a matter of sentiment. But that the franc is used in so

¹¹ The first five are members of the Latin monetary union.

many countries shows that the French are liked in many countries and influential there. Three of the newborn countries of Europe have adopted the franc, Poland, Latvia, and Estonia.

Albania, which has no currency of its own, adopts the gold franc for accounts.

On June 19, 1925, the value of the above coins at New York was: France, \$0.05; Belgium, 0.05; Switzerland, 0.194; Italy, 0.04; Greece, 0.02; Spain, 0.15; Yugoslavia, 0.02; Rumania, 0.005; Bulgaria, 0.009; Finland, 0.025; Norway, 0.17; Sweden, 0.268; Denmark, 0.188; Checo-Slovakia, 0.03; Gt. Britain, 0.2435; Holland, 0.40; Germany (*reichsmark*), 0.24.

CHAPTER V

SOME PICTURES ¹

These forty-three pages of study of the half-tones are gathered into a chapter for the convenience of the student. The plates are easily found, scattered through the book, as far as possible in connection with matter they illustrate.

SCANTY AND DENSE POPULATIONS

Frontispiece left—Alpine peaks near Meiringen.

1. Would you say the Alps here are inhabited?
2. Locate Meiringen with regard to Bern and Zürich (Fig. 22).

3. How much of the country seen in the picture can be used by man?

4. How much rock—what proportion of the whole view—is in sight?

5. Has the rock any use? For use in building houses rock must break readily into cubic blocks, and this rock does not. Can you make out what the buildings are made of? (Look at Fig. 43.)

6. Does the picture show where the material might come from?

7. In most of the northern valleys of the Alps the houses are of wood. Can you make out two reasons?

8. Can you get any idea of the height of the mountains in the picture? The peaks here have an elevation of 9000 feet and the valley floor 2000. Elevation is not height.

¹ All photographs taken by the author personally to illustrate local and national geography.

9. Can you make out that the shadows are pretty level? Soon the valley will be deep in shadow but the peaks still brightly lighted.

10. Do you think of many people living on each square mile of this region? What shows at this place on page 28?

11. The river in the foreground is the Aar. The stones along the bank are somewhat rounded, and after each rain that floods the river new stones are found there and the old ones have disappeared. Where have they gone? This has been going on for thousands of years. How does the river happen to be deep down in a valley?

12. Can you make out any crop men are growing here?

13. Why do they need the rail fence seen on the right?

14. What is the best crop for the greater part of this landscape?

15. Such a region attracts as *scenery*, which has the great economic advantage over other commodities "sold" that it does not have to be delivered to the purchaser to be carried off by him. Moreover, since people tell their friends about what they like, the more you sell the more buyers of it you have. Very different from a coal mine, where your sales end with a hole in the ground, good for nothing, or even a farm which must be planted, cultivated, and fertilized again every year if you are to sell crops from it. For a square mile of Alpine country the Swiss hotels and railways took in in 1894 about \$2500. For a square mile of Iowa in 1899 the state took in for crops alone, saying nothing of animals, poultry, milk, butter, and eggs, \$3600. Could Iowa afford to have Alps in place of farm lands, if the exchange could be made by wishing?

16. Where do the few inhabitants of lofty mountains live?

17. The frost breaks rocks off from cliffs like those in the picture, and much harm is done by such falls in the valley below. (See Fig. 44.) Note the gentler slope behind the house. Is that house much in danger from avalanches? It is a terribly common danger in high mountains.

18. Is life lively or dull here? Suppose a son went away from this house to the city. Would he be likely to come back to stay?

In general life is hard here. Until the tourists began to come it was almost intolerable. Even now the Swiss who enjoy the scenery, and they are only outnumbered among the tourists by the Germans, are the Swiss of the plains north of the Alps, not the dwellers amid these scenes. "No contrast can be more painful than that between the dwelling of any well conducted English cottager, and that of the equally honest Savoyard. The one, set in the midst of its dull flat fields and uninteresting hedgerows, shows in itself the love of brightness and beauty; its daisy-studded garden beds, its smoothly swept brick path to the threshold, its freshly sanded floor and orderly shelves of household furniture, all testify to energy of heart, and happiness in the simple course and simple possessions of daily life. The other cottage, in the midst of an inconceivable, inexpressible beauty, set on some sloping bank of golden sward, with clear fountains flowing beside it, and wild flowers, and noble trees, and goodly rocks gathered round into a perfection as of Paradise, is itself a dark and plague-like stain in the midst of the gentle landscape. Within a certain distance of its threshold the ground is

foul and cattle-trampled; its timbers are black with smoke, its garden choked with weeds and nameless refuse, its chambers empty and joyless, the light and wind gleaming and filtering through the crannies of their stones. All testifies that to its inhabitant the world is labor and vanity; that for him neither flowers bloom, nor birds sing, nor fountains glisten; and that his soul hardly differs from the grey cloud that coils and dies upon his hills; except in having no fold of it touched by the sunbeams.”²

The enlightened Swiss live in the Alpine Foreland between Lake Geneva and Lake Constance, where there are plains and fields and factories. Those are the Swiss who maintain the high reputation of the country for intelligence.

Frontispiece right.

In the Po valley a few miles north of Milan. Closely planted fields of vegetables and alfalfa but always with the little mulberry trees standing in the fields, uniform in the postlike stump and symmetrical head of long twigs or branchlets of paired leaves.

1. Would you get an impression of denser population here?

2. The ground has crops everywhere. Will not the shade of the mulberries hurt them?

3. What will the tree look like when the long twigs of leaves are cut?

4. What are the sides and roof of the building on the right made of?

5. The rails are of an electric road from Milan to Como. Does it suggest population? Alpine railroads are to carry

² Ruskin, *Modern Painters*, Vol. IV, p. 314.

tourists for two or three months in summer, so they are usually of narrow gauge to make construction cheaper, especially as the mountain road-building is always costly.

6. The back of the middle building has openings for ventilation made by laying bricks on end with open spaces a little less than one brick wide between them. The upper row of bricks stands on these, each brick resting on two bricks below. It is a common Italian way of letting air in. What sort of winter does it imply?

7. How many people to a square mile are there here? (See page 28.)

8. The valley of the Po is the old head of the Adriatic filled in with dirt washed down from the Alps in many muddy streams. Also some from the Apennines; less, for the Po is nearer the Apennines than the Alps. Do you see that that follows?

9. If the Po were drawn in on Fig. 22 at page 66, it would have only one of our great cities on it. Which one is that? Mostly the banks of these rivers are unsafe for towns.

10. How are the seven cities of the Po valley located?

11. Why do they avoid the river? ³

FRENCH THRIFT

Fig. 1 was taken in the village of Joué, a few miles south of Tours.

1. Where is Tours? Locate it on Fig. 22, page 66, by two great cities that it lies between. The country around is Touraine.

³ An excellent account of the Po valley is Miss Newbigin's *Frequented Ways*, Chap. XXI.

2. Are these boys or girls? What have they on their legs and feet?

3. How nearly alike are they dressed?

4. Do they look sickly?

5. Could we get an American boy to wear that frock?

Frock and cap are widely used for play and for school. It is as much the correct thing for French children as a baseball suit for an American boy in the season. Children of the fairly well-to-do want them, to be like other children. They are for economy, but no one is ashamed of economy in France. Well-to-do and poor alike take pride in economy. Of course there are exceptions, but an American who has not been in France can have no idea how strong this idea is with them. They want full money's worth for the smallest coin. It is admirable, but at times takes forms that astonish us, as when a distinguished Frenchman spending several months in an American city in the place of an American sent to France never had any American money with him, but always called on an American who went with him and was to look after his expenses in a general way to buy him a newspaper or get him a ticket in the electrics. Most Frenchmen are so quick to learn that they would have supplied themselves with change like an American for little things like that, they would have seen that it was the American way; but they would have felt the same inclination as he to save needless expense—were not all expenses paid?

A child with a frock regards himself as well dressed, for he knows he is *suitably* dressed. We often think of France as the land of fine clothes. Better, it is the land of suitable clothes. A working girl at work dresses for

her work. In 1889 factory girls in America went out to work even in rainy weather with skirts dragging on the ground except when they held them up in their hand, but the girls in the great sugar factories at Meaux had skirts that cleared the ground by several inches.

French children are sturdy and healthy, dirty commonly enough, as they are allowed to play freely in the dirt.

Fig. 2. The fountain at St. Amand, a few miles south of Clermont-Ferrand. The village has but a few hundred inhabitants.

1. What are the bottles of wine out there for?

The water in the fountain had a temperature of 48° in August. It was practically ice-water. This is in the central plateau of France. Many volcanoes near were active a few thousand years ago and lava flows are found in many places, usually weathered into good soil. Lava flows have caves where the fluid lava inside ran away from the stiffened crust over it. Rain water gets into these caves, and when they happen to have more than one opening to the outside air there is usually a strong draft through them made by the difference of temperature inside and out, so that the caves are said to *blow*! This draft makes any water in the cave evaporate so fast as to cool it strongly, enough sometimes to freeze the water in summer and enable people to get ice out of the cave. Professor Glangeaud of Clermont-Ferrand has shown the people of St. Amand and other villages how to pipe water from these caves to their fountains, and is very highly thought of there.

2. Why is the ground near the fountain paved? It

is only for a short distance as you can see, and the village streets are not paved.

3. What is the pail of water for? It is not French custom to put running water in the houses even in large cities. There are hydrants every little distance along the curb where the servant fills her pitchers and carries the water into the house. This means work, much work, but in France life always means work.

4. How many pails may be filled at this fountain at once? How are they supported while filling?

5. Are the French unusually honest, for people to leave seven or eight bottles of wine at the fountain like that?

The French are reasonably honest. Most people are everywhere. The wine is worth little and anybody is likely to pass at any moment. It is the ordinary table wine that is put before you at meals in France like water here, with no charge. Every house in the village has it and will use it for dinner. They regard it as food and think it needed. Professor Glangeaud and some friends are expected to dinner at the inn opposite and the innkeeper has an eye on the wine. The War and extreme suffering and hunger following have made stealing common in many places in Europe. That will doubtless pass with bad times. Europeans are just as honest as Americans. In New York, whatever you leave out of your hand a moment will be stolen. No place in Europe is like that normally. On Italian trains baggage was likely to be opened if you had some lock easy to open. If you had a wire sealed on the lock it was safe enough up to the War. Possibly the train hands were not paid enough to keep them properly and so

many rich foreigners traveled in Italy with very valuable things left loose in a poorly locked trunk it really was a great temptation. It costs so little to have your baggage sealed that it was an unreasonable temptation to expose the trainmen to!

6. Can you read the name at the top of the tall building back of the fountain? Two-story buildings of stone built touching, without any space between, are common enough in French villages, very citylike.

Fountains in France and southern Europe are usually descending streams of water just as comes from the kitchen faucet when open. They are designed to fill domestic water pails, not for ornament.

Fig. 3. Cottage of laboring man near Luynes, a few miles west of Tours.

1. What adornments has it? The creamy rock of the country and the excellent bluish slates set off the cottage finely.

Touraine is called the Land of the Châteaux, there are so many beautiful and famous ones, dating of course from the old times, before the Revolution. It seems the admirable building stone of this region (and about Paris) had a good deal to do with it. It is remarkably soft in the quarry and can be readily cut and carved, but hardens well on drying out. At Luynes the hillside quarries where the rock for the castle was cut out have been made into houses in the cliffside with a face of rock built up in front. In places here whole villages are housed thus in the rock of which rich and poor alike make their houses.

2. How many families live in the house?

3. Why have the stairs outside? The loft would be used only for sleeping. Sometimes the lofts are reached only by a ladder, and to avoid accidents sometimes the ladder is chained to the wall by the window above.

4. What grows over the doors?

5. Is the house pleasing to look at from the road?

6. Does it look new or old?

7. How would you like to live in it?

The windows, I think, are not glazed and the floor is probably of pounded earth. There is little room and few furnishings, a table, a bench, a bed, and a fireplace. The French adopt the English word *comfort* (*confort*) as if they had no word of their own for it. But where we seek comfort they practice *thrift*. The poorest man can save something if he is willing to live in a house as comfortless as that. "The savings of the rural people are largely deposited with the government. Interest is allowed, and on dividend day the people flock in such number to the local branch of the state bank that the countryside is depopulated. It is a motley crowd—important functionaries, fashionable ladies, laundresses, laborers, and artisans, all with their coupons awaiting their turn." ⁴

Fig. 4, a Washhouse at Morlaix in Brittany.

1. Where is Morlaix? Locate it among the cities of Fig. 22.

2. Did this building cost very much? A much used plan for these neighborhood washhouses estimates the cost at 1200 francs. How much is that? They are found in all parts of France. The clothes in Europe are pounded

⁴ Clifton Johnson, *Along French Byways*, p. 94.

rather than scrubbed. Small communities use the river bank. Obviously this is more convenient.

3. How do they carry the clothes to and from the laundry?

4. Could they wash here in a rain?

5. Do they?

6. Why have the corrugated iron roof open in the middle?

7. Is there any advantage in washing here over washing at home?

8. Is there any provision for heating water?

9. Would there be any economy in washing in a public place like this?

These four pictures give us a glimpse of French frugality and thrift. Abel Chevalley, himself one of them, draws the following picture of the French masses in Touraine.⁵

"My village is in Touraine, not the well-fed and scented Touraine of the châteaux, valleys, and villas, the only one known to the tourist. It is a little commune in Upper Touraine between Châteaurenault and Vouvray, on the river la Brenne, which descends from Vendôme to the Loire. Of two hundred and thirty voters there are only three or four who are not proprietors. Except for the châtelain none of these proprietors possesses more than twenty acres,—I am one of them,—and the majority of them have only from two to four acres. This condition obtains in nearly all France. In the middle of this solid mass of peasant owners, the nobles and bourgeois are more

⁵ Reprinted by permission from "France and the Ruhr," *Atlantic Monthly*, June, 1923, pp. 837-39.

or less isolated, without influence on local affairs. These peasants govern themselves. They are not organized into political parties, and, although agricultural interests dominate France, there is as yet no agrarian party in Parliament. But Parliament does not dominate local life. Nine-tenths of the municipal assemblies and of the departmental councils are in the hands of the small rural owner.

"But let us return to my village. All the inhabitants of my village are both farmers and vine-growers. Even the smith and the grocer, the butcher and the baker, possess a small strip of vineyard or of arable land. None of them is really rich, none of them employs other hands than the members of his family, and occasionally one or two day-laborers. But none of them is poor. There are only five or six families with more than four children. The majority, alas, have only two—three at the utmost. About a fifth had bought Russian bonds before 1914. Three-quarters have bought French bonds before, during, and since the war.

"There has been an enormous intellectual change among them during the last twenty or thirty years, thanks to the great development of elementary education which is the principal achievement of the Third Republic. Their ways of living are still mean, but they are no longer the ignorant masses described by J. C. Bodley twenty years ago, or the 'swarming millions embruted by toil, avarice, and superstition,' whom J. B. Crozier considered thirty years ago as the great obstacle to the political evolution of France. They read much and they think much more. I have lived among the peasants of Norway and I know

those of England. I can assure my readers that the peasants of France are today, taken as a whole, in process of becoming just as cultivated intellectually, though they live less comfortable lives.

"There are about thirty-three thousand little communes of this sort in France. They are inhabited by four million small peasant-proprietors. These, added to the three million artisans and shopkeepers of whom I have already spoken, make about seven million Frenchmen living a life as independent as can be imagined in a world where all men depend on one another. These individualists do not constitute the whole of France, but they are the dominant majority. Nothing can be done without their consent, and nothing can be done against their wishes. They are irresistible because they are indefatigable. They don't write and they don't speak in public. They are not organized as a class. The day is coming when they will be welded more firmly together, but they have an instinctive distrust of collective tyrannies, even the tyranny which might result from their own unions. Passive resistance and slow pressure are their weapons. They do not know themselves.

"No one has yet really translated the aspirations of this mass of men, for they have not yet emerged into self-consciousness. A hundred years ago they thought only of keeping their land, of acquiring a little more, and of freeing themselves from clerical and military domination. Since then the political and religious tyranny that the average Frenchman feared has receded before his patient resistance. . . . His destiny is to maintain not so much his political liberty (which after all is only a

means), but his economic independence, and his personal liberty, which he silently considers as the best things that life can give. He is not 'merry and bright.' Nothing could be duller for the average American than his existence; but he is happy in so far as man can be happy—that is, in proportion to his capacity for realizing his own potentialities. . . .

"In Paris I have lived for twenty-two years (except during my absences abroad) in one of the large southern quarters where there is no big business. The economic activity of this quarter is seen in the small workshops, and the small shops, carried on entirely by the family, or a very small number of employees. It is the life of the provinces transplanted to Paris. It is the missing link, that foreigners are all looking for and that so few know how to find, between the capital and the rest of the country. The only point of complete resemblance between Paris and France is in this very great number of practically independent workers. In the world of thought and in the world of work they were the soldiers of all our revolutions in the nineteenth century. They resisted every effort to centralize political authority or economic power.

"In France, the large stores have not yet killed the small shopkeepers. The large manufacturers have not yet crushed the small employer. Joint-stock companies have multiplied and have successively taken charge of all branches of production and commerce. But for all that they have not yet got the upper hand of private enterprise in France. Private enterprise, aware that it is threatened, nevertheless rubs along. One might have thought that soon, in France as in other countries, there

would not be a single individual left who was not the agent or the employee of a big company. Not at all. Shopkeepers and artisans have survived. Their trade associations resist the domination of the wholesalers, and the competition of their gigantic rivals. Politically they withstand the workers and even the intellectuals. Since the war they have held their heads higher than ever. Even at Paris they have increased rather than diminished in numbers compared with 1913. The war seems to have left many ex-soldiers sick of authority in any shape or form. They prefer the risks of a small business of their own to the higher wages which they could earn in the service of a trust. There are three million men of this type in France, making eight or nine million persons when you count their families. At Paris and in several of the large cities such as Bordeaux, Nantes, or Rouen, they outnumber the workmen employed in the large factories, and they effectively dominate the municipal councils and business."

THE NORTHERN HIGHLANDS

Fig. 10, house on a narrow strip of soil in the Flekkefjord.

Identify the position in Fig. 22 as just west of the southern tip of Norway. Usually in the Flekkefjord from ten to fifty per cent of the landscape as you see it from the water is green with growing things.

1. What per cent in this view? We are an hour's steaming up the narrow fjord from the sea.

2. What is there in the picture that shows us that we are not on the open ocean coast here? I find three items.

3. Can you find two things the people have planted

here? Most of the rock is a purplish granite, quite bare and even polished. At times there is a little heather in the crevices. There was a belt of softer rock—a *dike*—extending from the notch in the sky line to the boathouse, which decays into soil faster than the granite does. That is the reason for the bit of soil. Ages ago, when all this rock was deep down, it was cracked right through here and molten rock of a different sort from the granite was squeezed into the crack, forcing it open wider and wider until it was as now sixty feet wide. As the rocks have crumbled away in the frost the granite is slowest to wear and stands up high. On the coast outside there is often only five or ten per cent of green in sight. The view is a very good one to suggest what Norway is like, a big country—*areally*—of which its government says only four per cent is usable soil.

4. How many square miles of soil would that be? Compare with Massachusetts in area. In Massachusetts it is quite common to see a patch of bare rock. In Norway all you can hope to see is an occasional patch of soil. If Massachusetts is rocky Norway is *rock*. Geologists tell us the Earth is a ball of rock. You can believe it when you are in Norway. It would be interesting to know if other parts of the Northern Highlands Province—say Scotland—can show scenes like this.

5. Would the girls in this family know how to row?

6. Can you see that the buildings are of wood? Why not of stone? Norway has no stone castles like those we heard of in Touraine and yet these same Norwegians when they went down into France nearly a thousand years ago built great castles everywhere in Normandy.

So they did in England when they went over there from Normandy under William the Conqueror, and maintained the authority of nobles in these castles over the common people around. No castles in Norway and no nobles. One of the few places in Europe without them. Sweden has them and Denmark. Stone castles are quite a help in establishing noble families and making them last so that a baron's oldest son may rule over the neighborhood after him. There were chiefs in Norway, too, in the old days as now, chiefs who built themselves big houses, but of *wood*—"The same spring (1028) it happened in Halogaland that Harek of Thiotta remembered how Asmund Grankelson had plundered and beaten his house servants. A cutter with twenty rowing benches, which belonged to Harek, was afloat in front of the house, with tent and deck, and he spread the report that he intended to go south to Trondhjem. One evening Harek went on board with his house servants, about eighty men, who rowed the whole night; and he came towards morning to Grankel's house, and surrounded it with his men. Then they made an attack on the house and set fire to it; and Grankel with his people were burnt, and some were killed outside; and in all about thirty men lost their lives. After this deed Harek returned home and sat quietly in his farm. Asmund was with King Olaf when he heard of it; therefore there was nobody in Halogaland to sue Harek for mulct for this deed, nor did he offer satisfaction." ⁶ What was the relation of the chief who was burnt with his men to the one who abused Harek's house servants?

7. What is the matter with the rock in Norway as

⁶ *Sagas of the Norse Kings*, Sturleson, Laing, Vol. 3, p. 178.

building stone? People come in here to take the train for Egersund,⁷ the next important place to the northward, because they are seasick on this part of the trip as there are no islands off shore here. Most of the trip up this coast may be made in still waters inside islands (see Fig. 18). Railroad building is very costly in Norway, as you may see, but along here nearly a hundred miles of railroad have been built. To Oslo there is no railway, you must go by boat. You buy a steamer ticket along this coast and it is good on the railway, so a rough day at sea makes many passengers land at Flekkefjord to go on by train.

8. Would most people here have boats?

9. How would you like to live here?

Fig. 11, Head of Stryn Lake glimpsed over a snowdrift 4000 feet above.

Fig. 22 shows four riverlike indentations in southwest Norway: from south to north they are: Hardanger, Sogne, North, and Trondhjem fjords. Stryn Lake is just east of one fork of the east end of the North-fjord. It is forty-odd miles inland from the sea. We are about a mile above sea level.

1. Where can men live here?
2. Is there any soil possibly in the view?
3. Where would it necessarily be?
4. What does the visible country seem to be made of?
5. The sky is the usual one here; how will you describe it? (See Fig. 58.)

We are looking a little north of eastward down into

⁷ Egersund is at the south point of the southern notch on the west coast of Norway on Fig. 22,

Hjelle at the east end of Stryn Lake and up the Videdal where the road goes up to Gudbrandsdal in eastern Norway. The Videdal is in the mid-background of the view. Hundreds of square miles around here have no inhabitants. There is a hotel at Hjelle on the lake, a little settlement at Stryn at the foot of the lake, another behind us at Loen; all down by the water near sea level.

6. Is the upper surface mountainous or fairly even? Do you know from the description at page 31?

7. What can you see that is of value to men?

8. What evidence of the work of men?

The road up Videdal is an admirable piece of human labor but quite invisible at this height. Man certainly is of little importance in such a view.

9. What density of population prevails here by the look and by Fig. 9?

10. To what parts of the view is the snow limited?

The picture was made in August, 1904, at about 4000 feet above the sea. Some of the snow doesn't melt away in summer. That is not known in Scotland, which has a similar surface but much lower. A few miles south of here is the Jostedalsbrae, 360 square miles of ice sheet on the top of Norway, like the much bigger one on the top of Greenland. It never melts. The homes of men are entirely down at sea level. Not a cold country, in spite of the snow above. The mail comes to the head of the fjord by steamer all through the winter. The fjord never freezes over except a mile or two at the head. The postmaster goes out on the ice with a sled and takes the mail from the steamer, but for forty miles to the sea and all along the shore of the sea the water—salt water—never freezes.

The water along the Norwegian coast is cold but always stays a few degrees above freezing.

Fig. 12, Loen, a sort of village at the head of the North-fjord. Thirteen families live here, about half of their houses showing in the picture. They are all called Loen. Marcus Andersen Loen kept the hotel, Sinnove Andersdotter Loen one of the farms. Their middle name is their father's name, with *sen* or *dotter* after it and among themselves that is the name they always use: Marcus Andersen, Rasmus Kolbensen, and so on, the *Loen* being kept for writing and more formal uses. It does not mean merely that they live at Loen. Ole Rasmussen, the postmaster, was not a *Loen* but Aabrekke, because he owned no land at Loen but came from Aabrekke. Children and all, the Loens were 80 and lived on the little patch of soil that the river has washed into the head of the fjord here. Loenelv is the river, Loören its delta and Lofjell the cliff.

1. Can you make out the subdivision of the Loenelv into branches on its delta?

2. The lower slopes of the Lofjell on the right are covered with birches up to 1300 feet. What is above the birches?

3. At what height is the farm on the hillside?

4. The Northfjord into which we are looking here zigzags towards its head. Can you make out its course among the hill points on the left?

5. Is the Loenelv smooth or rapid?

6. What percentage of this view is probably green?

An ocean steamer lies out there in the fjord, for the water is very deep. The tide rises and falls three feet, though we are forty miles from the Atlantic. The fresh

water of the river, being light, floats on top of the salt water and the cows come down and drink out of it. It is this fresh water at the head of the fjord which freezes over in winter. On the Loen Lake, which is behind us a few miles, are two other little patches of soil, Bødal and Naesdal, and in these three spots live all the people of the region, Loens, Bødals, and Naesdals by name. A wonderful road now runs around the head of the fjord, built for the use of tourists. A little grain and potatoes for their own use and milk and butter is all the people at Loen can produce. The cows are sent up on the hillsides to pasture in summer and all the grass saved together with the potato tops and the young tips of the birches to feed them through the winter. Every blade of grass is cut and stored away. It is so precious that hens are not kept, they dig up the grass so. Eggs consumed at the hotel are "made in Germany."

Fig. 13. The top of Norway. The picture was made on Blaamanden, 1850 feet up in the air above Bergen.

1. Locate Bergen on Fig. 22.
2. What per cent of the landscape is green?
3. Are there signs of men in the picture?

The green stuff is moss and heather. The rainfall here is very heavy and the air so damp that dust is almost unknown. The little tarn in the rocks is filling up with sedgy growth around the edges. After many years it will be a peaty bog or meadow. This is just fjell and has no use. There is no pasture here. The pastures that the cattle go up to are in high valleys, not on rocky fjell like this. Norway has no profit from this part of the country, yet most of Norway and some of Sweden is just like it.

Fig. 18. The inland passage north of Bergen. The swarm of islands on the coasts of Norway makes it possible to travel by steamer for hundreds of miles along the coast in almost perfectly still water. The Norwegians call it the *skjaergaard*.

1. Is there any sign of life on these islands?
2. Is there any sign of motion in the water?
3. Would there be much temptation to use a boat in these waters? Would it call for special courage?

Even when strong winds and high seas are raging outside, it is quiet in here so a Norwegian seaman always has quiet water near when he goes out into the storm.

4. Would you notice it in the night if your steamer came out of a passage like this to a bit of coast where there were no islands?

These passages through the *skjaergaard* are very important because most people along the coast can only get about by water. Railways from the eastern valleys only reach the west coast at Trondhjem and at Bergen.

5. Identify Trondhjem and Bergen on the map.

Fig. 19. House-building at Bergen.

1. Does it look like a log cabin? At what points?
2. Do you notice the ends of the partition planks on the right?
3. Can you make out any sign of a frame to this house? The planks making up the walls are four inches thick, planed, tongued, and grooved, and the walls are held together entirely by the dovetailing at the corners and partition ends.
4. How are the pieces of wall between windows held

together? You can see a temporary expedient between the upper two windows on the right. The tongues between planks hold too, and the window frames where nailed to the ends of the planks.

5. Does such a house seem as strong as our frame houses?

There is an outer sheathing like our clapboards over the outside, but of inch-thick stuff. The roofs are, in the country, often sods laid over birch bark on rafters. When they can afford it, tiles are used. In the larger cities brick and other materials are used but the mass of the Norwegian people live in wooden houses, and always, as everywhere in Europe where wood is used, it is a refined log cabin like this. In Sweden, too, but there the most widespread style of wooden house has vertical planking. The houses do not have a frame within.

Fig. 20. Palace Street, Carnarvon.

1. Why Palace Street?
2. Where are the people? Picture taken before eight in the morning. English townsfolk are late risers.
3. Locate Carnarvon on the map.
4. Where is the sun? Can you make out by the shadows?
5. What is the material of the houses? Bergen, Norway, has nearly 100,000 people, but most of its houses are of wood. Norway is exporting lumber. Wales exported all of hers long ago. There are some plantations of trees in occasional valleys in Wales.
6. Can you read the name of the inn on the right? Their last name is usually Arms.

7. Look up the founding of Carnarvon Castle and how Madoc burned it. However strong a castle it is astonishing how its capture and destruction by enemies always figure in its history.

Carnarvon Castle was a fortress base for Norman troops in the conquest of Wales. We must suppose, therefore, that the good building stone of Wales helped in the conquest, for Wales has excellent slates and other building stones used universally for houses. In that it is unlike Norway, though it is a part of the Northern Highlands, a low part and close to England in the North Central Plains Province.

Fig. 21. Welsh cottages at Pont Erwyd.

1. Is the upland in Wales like that of Norway?
2. What use can men make of this?
3. Is the water clear or muddy in the river? Do you know which it is that photographs black?

4. What are the houses built of? Their form is Celtic, a universal type in Wales, Cornwall, and Brittany in France, whose people originated in southwest Britain. The features are: one story, stone walls sometimes stuccoed over or whitewashed, slate roofs with almost no eaves and in places cemented at the edges to prevent the wind from blowing the slates off, a chimney at each end with its outer wall a part of the house wall.

5. Do the trees look thick of foliage? Mostly they are the same species of trees as we have in the eastern United States but notably with more leaves, possibly on account of the moist air.

6. What is the rainfall here? (See Fig. 55.)

ENGLAND

Fig. 27. Frampton Court, near Dorchester.

1. Locate Dorchester on a map.
2. What does this word *Court* mean?
3. What sort of house does it appear to be?
4. What are the houses built of?
5. Do the many chimneys tell how the house is heated?

The estates about these places are often measured in square miles. There are farm lands belonging that are tilled by the tenants, possibly a village that belongs to the lord of the manor or a county. You may drive in freely if you do not stop near the house. There are days when you may visit the house. In these county houses is led the life that Englishmen most admire, a life of very active leisure. The houses are usually large with many servants, excellent servants in their way and costing but one or two hundred dollars a year. They are English, a servant class which means to remain at service and enjoys being in the service of people of distinction.

Not all of these county houses have the conveniences of lighting, heating, and plumbing that are universal in America—"hundreds of thousands of Americans enjoy them—where hundreds are thus housed in England," but in businesslike management they are remarkable.

"The linen-room, store-room and wine-cellar departments are guarded by lock and key—soap, candles, tea, sugar, coffee—all the minor details of housekeeping are looked after as carefully as are the minor expenditures in a great business." ⁸

⁸ Collier, *England and the English*, p. 140.

Norway has nothing like this, nor have the Uplands generally. Essentially this is good farming country and its wealth was once drawn from the soil but now from the ends of the earth.

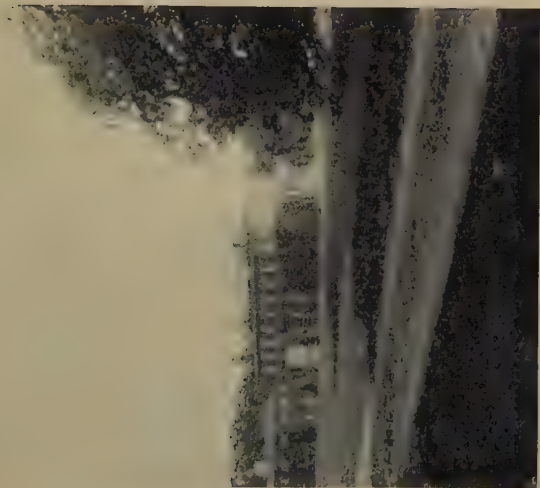
Fig. 28. Martinstown laborers' cottages.

1. Compare these cottages with the Celtic type.
2. What are the roofs made of?
3. Is there any sign of adornment about the cottages?
4. Can you make out anything on the sign that hangs high on the left? (See Fig. 20.)
5. Does the road seem a good one? What is its material?

We are in the chalk country of the Downs and the chalk is full of hard flints. These make very hard roads when the flints are cracked and thrown on it. You see heaps of broken flints along the road everywhere, ready for mending as soon as a hole or rut develops. Drinking at the "public" is almost the only pleasure of the laborers, who are poorly paid and have no prospects of advancement. Moreover, these men have nothing invested. In that they are unlike the French. When they cannot work they must go to the workhouse. Their lives are very dull. Naturally they are astonishingly unintelligent. An established peasant usually is.

Fig. 29. Threshing on Box 'Edge Farm.

1. Can you see the threshing engine?
2. Where is the separator?
3. What have they done to the stack behind the engine? Why?



27. The English rich live in the
country



28. Laborers' cottages near "public"



29. Thrashing in the Chalk downs



30. Young Liverpool wears wool in August

4. How would you describe those hills? They are part of the Downs.

5. How are the separate fields marked off?

6. From the buildings would you judge this is a little farm?

English farms run rather large. On the building at the left of those in front a pear tree has been trained against the wall which faces south. Remember that England lies far to the north—up in the Hudson Bay country are those latitudes over here, and the sun is not so powerful in summer as here. To ripen fruit they are trained against a south wall and become wall-fruit.

7. What are the buildings made of?

8. Are they old or new?

9. Are there many trees in the view? Compare the other English views.

Fig. 30. Outskirts of Liverpool August 6, 1911. A very hot, dry summer.

1. Any similarity in the clothes of the two boys? They were very likely brothers, but there were others, and the uniformity of dress was striking.

2. Do they appear to feel the heat? I was there and found it pretty warm.

3. Are they dressed to be cool?

4. What are the differences between their costume and that of American boys?

Two-piece suits are not purchasable in England and everybody wears wool and dark colors. They look as the west Norway people do, very warmly dressed indeed. It is the custom to wear wool next the skin here, too. The



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30. Young Liverpool wears wool in August

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moist climate is supposed to require it. They are well shod and have sound clothes. They cannot be very poor but accepted a penny each gratefully.

Fig. 31. Well-to-do residence at Garston, Liverpool.

1. How is the house separated from the street?
2. Do you understand the chimney top seen?
3. Is this a rich man's house?
4. Does the owner keep a carriage?
5. Compare the visibility of the house from the street with that of American houses in the outer part of a large city.
6. What is the material of the houses?
7. Does the house look solid?

All the English love solidity and like to have their houses secluded.

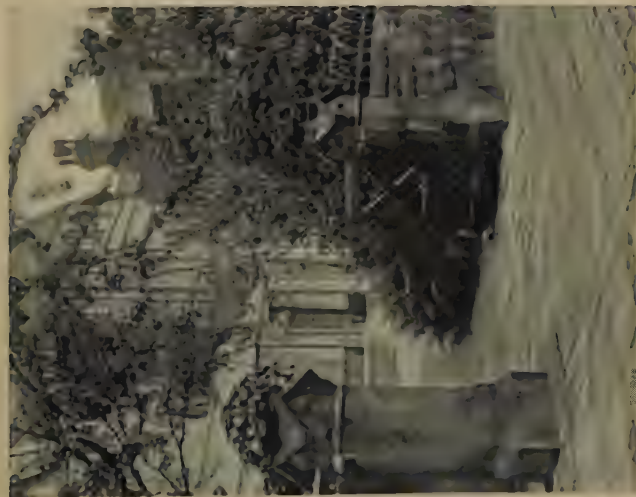
Fig. 32. Footpath across private estate at Dorchester.

1. Is the water clear?
2. Should we have so solid and pleasing a bridge over so small a stream?
3. Do you perceive the thickness of the foliage? It is due to much moisture in the air.

The path leads right across the lawns of a very handsome house. The English combine established rights like that with real neglect of the poor man's welfare.

FRANCE

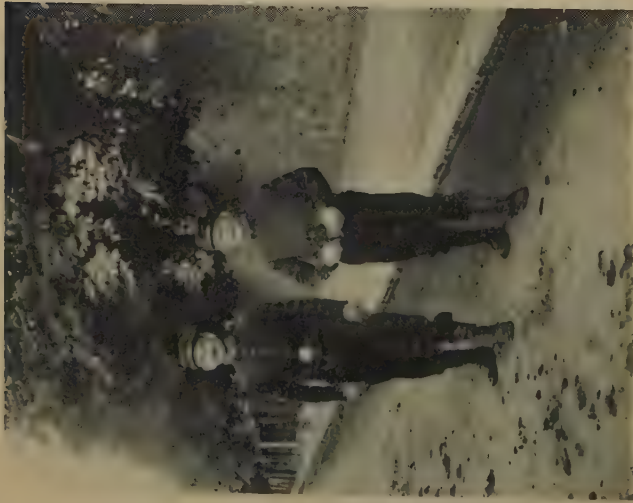
Fig. 33. Young French soldiers from the barracks at St. Brieux in Brittany, 1911. St Brieux was one of the many garrison towns where the young men took their three years' military training.



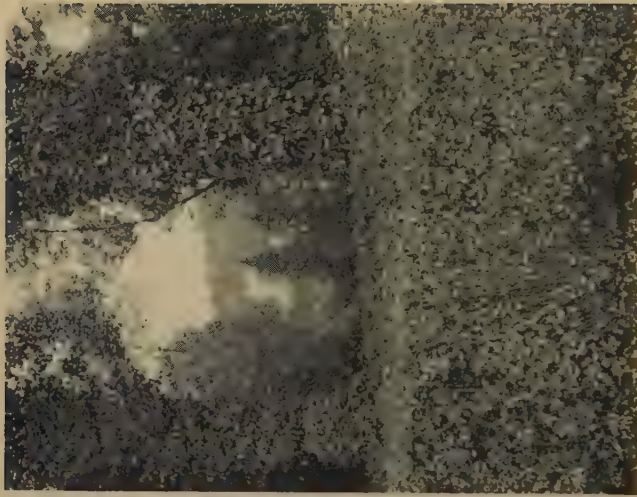
31. Wealth withdraws in Liverpool



32. Public footpath across estate



33. Young France on "service," 1911



34. Oise Chateau - back from the road

1. Do these young men look puny? Their faces had an excellent color.

A photograph doesn't bring out color well. Coats and caps were dark blue, not the horizon blue of war time, trousers red and high shoes black. There were a good many around, curious to see a stranger making photographs about a garrison town, and on being asked questions about a house that was building, asked to have their pictures taken.

2. Does the stone in the wall break up into good square blocks? Compare the blocks in the doorway in Fig. 35 at Tours. The building stone of Brittany is apt to have poor fracture and needs corners and window and door frames of imported cut stone.

Fig. 34. Château of Stors, near L'Isle Adam. On Fig. 22, about halfway from Paris to Rouen.

1. Does the building look like a castle?

2. What is the difficulty of seeing it?

3. Which costs more in proportion to the grounds it stands in, the house of the rich man or that of the poor?

Characteristic is the amount of land set aside merely for the park of the noble, now merely held by some rich tradesman very likely, but once the seats of the men who owned the whole countryside. The building stone, most excellent for building, soft when quarried but hardening quickly. The wealth of these men was the fertile fields around. The present owner may have made his money running a department store in Paris or manufacturing shoes, but the old-time aristocrat disposed of the crop of one of the most fertile regions in the world and of the

labor of the men born on the soil. When Caesar conquered France and made the native Gauls send a tenth of their crop to Rome, there was bread to give away to the Roman people and wealth such as Rome had never known before. The castle stands for later development of the wealth of the same soil.

Fig. 35. Rue Plailly, Tours, a street of rather less than average pretension.

1. Is any of the creamy-colored fine stone of the neighborhood used in these buildings? When the two colors show only the corners and window and door frames are of good cut stone, the wall being simply small scraps of stone stuccoed over.

2. How are these houses heated? Do the chimney pots tell you anything? The three that seem to rise from the window really are on a chimney just behind it.

3. Do you see signs of a stable in the garden back of a house that stands on the next street?

4. Can you make out fruit on the pear tree?

5. Why the high garden wall? Often the walls have broken glass on top.

6. What is the street made of?

7. Is any part of it paved? The street was seventeen feet wide, each sidewalk four feet. A little new house in this street, four rooms, seventeen by twenty, and garden as much more, two stories, rented for eighty dollars a year. Outer wall nine inches thick, wall of kitchen in garden three inches, partitions one and a half. Lawns and gardens in front of house are not used, except behind a high iron fence or wall. Our fellow man is obviously to be kept out!



35. Provincial city street—Tours



36. Old Avalon is quaint but dull



37. Paris gives room to look at her buildings



38. A most efficient engine on good roads

Heavy wooden shutters with iron fastenings to the same end.

Fig. 36. Jean Berg's Belfry at Avallon.

1. Can you make out that the street is wet? Do the sky and the light agree in their story?

A light drizzle does not trouble continental people. They are less sensitive to weather than Americans.

2. Locate Avallon on Fig. 22 about halfway between Paris and Lyons.

3. It is interesting to see the dark heavy walls and heavy towers, these solid walls meant to keep out enemies who always seemed to get in, but the people who still inhabit places like this do not seem to get any pleasure out of their quaintness. They have still to cultivate the lands around today, still shopwork to do in town and buying and selling the things of today, and all these ancient buildings hinder rather than help. They are anachronisms. What there is of the best and most hopeful in Europe is not here.

Fig. 37. The young and the capable of Avallon are going up to Paris, where are to be found the things of today as well as so much of the past, a past that is not so remote in parts but that it impresses us profoundly even today. I have picked a single building, the Madeleine with its superb access by the Rue Royale, which it fitly closes—a building so well proportioned that you must measure with a well trained eye or with a measuring tape before you can believe in its imposing dimensions.

The genius of France is good taste, adjustment of an

object to its surroundings. Individuals in many lands attain this faculty, but nowhere is it so widely possessed as in France.

1. Is the church a large one?

2. How high is the base of the columns above the street? You may compare with the automobiles in the street just below.

We are a city-block distant. The Grand Boulevards cross in front of the building right and left. Cars are parked in the middle of the Rue Royale. We see only half of its width in front of us. The many-storied buildings on right and left rise to about the same height as the Madeleine. The opportunity to look at the building is as fine as the building. This is characteristic—a fine building is put on a fine site, and that is *where you can see it*.

Fig. 38. The peasant woman and her donkey cart. Does the donkey appear overloaded?

On superb roads—you may look back to Fig. 35, it is not unusually good for France, and the country has almost as many miles of them as we have of railroads in the United States, the donkey carries his mistress and her flowers and vegetables with surprising ease. The donkey cart is as well adapted to the needs of this mistress as a French work of art to its settings. He is cheap. His cart is cheap. She is poor and the cheap conveyance widens her radius of life and increases her not inconsiderable dignity, the same dignity and graciousness shown by her humble sister of sixty years in Paris streets who hands us with quick recognition the same paper that we bought of her yesterday, before we have named it. As it happens,

the picture was taken in Algeria at St. Denis du Sig, an Arab town; but the railway is French, the road is French and so are the old lady and the donkey.

SWITZERLAND

Fig. 43. Usual Swiss cottage above Amsteg, Uri. You are to locate Uri on map of Switzerland, also Lake Lucerne and the St. Gotthard pass.

1. In what direction are we looking? The road from the St. Gotthard to Lake Lucerne runs in the same direction.

2. Notice the fruit trees against the house wall. In what direction does the wall face? Is that customary with wall fruit?

3. In what latitude is Lake Lucerne? Where would that parallel pass in the Great Lakes country?

4. How far north of New York? How many miles?

5. Is it fair to call this house a log cabin? See Fig. 19.

6. Does it have any distinct differences from a log cabin?

7. The window frames project from the wall as the house is meant to have an outer sheathing, here often of stucco. The ends of partition planks are often boxed to protect them from the weather. Are they here?

8. Can you make out what the roof is made of? A square around the right hand—kitchen—chimney is roofed with flat red tiles. This is now being required, to prevent fires from sparks on the roof. As they get more money they will put tiles around the other chimney and then over the whole roof. You see all stages as you pass through a single village. Swiss fire losses are very large,

9. Up here what would the usual fuel be?

10. Chimneys are often made of wood, not continuing below the roof. Can you make out if that is the case here? In such case the smoke really gathers in the top of the room till it finds its way out of the chimney. The snow is often kept out by some cover, at times of wood with hinge and worked by a wire inside the kitchen.

11. Does the house seem to be painted? Very often they do not paint, but scrub the house every year with soap and water. The houses keep the yellow color of fresh wood for a number of year, but finally turn very black.

12. What have they been doing to the road? The road through this valley is very fine indeed.

Fig. 44, church at Oberwald near head of Rhone valley. Locate Oberwald on map of Switzerland.

1. What is the church built of? From the stone structure behind, does the stone of the neighborhood appear to break into good building blocks?

2. Why are the windows so small?

3. Can you make out the shape of the ground-plan of the building behind the church?

4. What will happen when snow and rock slide down the mountain-side on the church.

5. No such protection is built behind the individual houses at Oberwald. Why?

6. There is little to be earned at Oberwald. Why should men face such dangers as this?

7. Is this construction a reaction of man to his environment?

8. Can you think of another? What would *you* do

if you lived there and heard of the countries of the new world? Of course people differ, though. People get used to almost anything. Emigration from Switzerland is not large. It has been slowly increasing, and is about 8000 a year at present, not large for four million people. The emigrants do not, however, come especially from the mountain cantons, but more from the cities. Why?

Fig. 45. Road near Altdorf in Uri.

1. It is nearing evening. In what direction are we looking?

2. Are cows any more suited to this landscape than to flat country?

3. This valley is Uri. The tillable land that supports the people is between these slopes seen right and left. Will there be a large population? Will they be well-to-do?

4. Does the road seem good? What material?

5. How wide is the road? Why not wider?

6. Is the scene a pleasing one? With the colors of nature it is, of course, much more imposing. Beautiful but not rich. Much evidence of human labor is in sight, but man has disposed of limited resources. Uri is in the path across the Alps by the St. Gotthard pass to Italy, a very old route. Swiss independence began when an Emperor set the Swiss of Uri free if they would keep the path to Italy open for him.

Fig. 46. Isole Belle in Lake Maggiore.

1. How much of the lake is in Italy?

2. Do the houses look like those of northern Switzerland?

3. What are the differences in the houses?
4. Do you see a sign of warmer climate in the boats?
5. What is the building material?
6. How many families live in these houses? Could you call them tenements? Economy puts second stories under one roof here, for the chief climatic feature to defend against is the heavy rainfall. In the Jura, where the winter is cold, big houses for several families are but one story high but spread over a great space of ground. Outer walls are there the thing to guard against, to cool off the inside. A tall, narrow building like this would be hard to heat.
7. How is it heated? We are on the south side of the Alps here, which cut off all northerly winds. The winters are notably mild.
8. Is there any attempt to adorn the houses?
9. Why should they build of stone here? They have more timber than Uri has, forest at any rate. This canton, Ticino, has more than a quarter of its surface forested, while Uri has only eleven per cent. Does it matter that Uri has but 58 people per square mile and Ticino has 139? That gives Uri eleven per cent of a square mile of forest for each 58 inhabitants or $(0.11 \text{ by } 640 = 70)$ 70 acres, which amounts to 1.21 acres of forest per capita. How much for Ticino? Not so very much difference, and it gives Ticino plenty of wood to build wooden houses if she *wanted to*! But Ticino opens on Italy, and her people are of Italian culture, items in which are Italian speech and stone houses. Uri is of south German culture, speaks German and builds her houses of wood. Not merely the environment matters, but what sort of a man lives in it. Vidal de la Blache again!

A rowboat on Maggiore takes us easily and quickly into Italy, but we get to Lucerne only by a long journey over the St. Gotthard or through the tunnel.

Fig. 51, a sidewalk in Dijon. Locate Dijon on Fig. 22, about halfway from Geneva to Paris. This is Burgundy.

1. In how many pieces is the grating? Why?
2. What is it for? Why not pave close to the trees?
3. Is it any advantage to the tree?
4. Is this an intelligent thing to do?

In the parks in French and even Algerian cities a circular hollow is dug around a tree and filled with water for a week before filling in again. They think the trees valuable and put much labor on the care of them.

Fig. 52, *Pâtisserie et Boulangerie Viennoise* at St. Amand, central plateau, Vienna pastry shop and bakery. Housekeepers get their dishes ready and bring them to the baker to cook. But not bread. That only bakers make in France and it is excellent. Surprising to us is the way it is handled. It has a crisp yellow-brown crust of fine flavor. This firm strong crust is the bread's envelope. It is not usually wrapped. It is the commonest of sights, even on the boulevards of Paris, to see nicely dressed people carrying bread in their hands or under their arms. Some of the loaves are baked long, four or five feet long, and these are stood often enough in the corner of the baker's shop.

1. Do you see six loaves for sale?
2. Can you see what holds them on the door?

3. If the loaves were to be wrapped when sold, would that be a good place to keep them?

4. Will not the dirt of the street blow on them? The French are not particularly clean. It is the common thing in small towns and villages to run the slops across the sidewalk to the gutter. There is much to offend the American eye—and nose—in France.

Fig. 53, Torrent at Meiringen. Locate Meiringen on the map of Switzerland. Sudden washes of rain-water do much damage in all countries. In the old world much labor is expended to prevent this. A swollen stream may cut away valuable fields, or it may spread sand, gravel, and stones over them with an effect as bad. Both sorts of damage are particularly feared by the people of the Alps.

1. Why?

2. What two things have men done to the channel of this stream?

3. What has the torrent done to the hillside?

4. Suppose it washes gravel into the straight channel. Won't it soon fill it up and make the stream overflow on the land? Where the brook meets the Aar the banks of the river are paved with large blocks of granite.

5. Has all this work been done on the level lands?

6. Do you see any signs that the channel has ever been cleaned out? Abundant works of man are one of the great contrasts of Switzerland and its many namesakes, American Switzerland, Argentine Switzerland, Canadian Switzerland. Man has done but moderate things as yet to the new world.

Fig. 54, the Aar at Innertkirchen, a few miles above Meiringen.

1. Does this river course look natural? Explain.
2. Those *points* are groins. What are groins?
3. What is the nearest one made of? Where did they get the material? How may we know?
4. What will the Aar do to the groins in flood times?
5. What must men do then?
6. But if a flood had come here and there were no groins, what would have happened?
7. Is the Aar here clear or muddy? See Fig. 32.
8. Do we put any work like this on our rivers?

This little group of Swiss pictures illustrates the way inhabitants of lofty mountain chains can only occupy scanty valley areas and the considerable effort men have to make to maintain life there.

THE NOT INDOMITABLE MOUNTAINEER

The consensus of mankind has it that mountaineers excel in courage and love of liberty. There appears to be no justification for such a view other than that it has been widely taught. The mountaineer is a refugee, a defeated man who has sought shelter among the hills from stronger or fiercer men on the plains.

The only living place of man in the mountains is the narrow strip of flat land on the floor of valleys. Above are inaccessible peaks; there he cannot live. There are grassy mountain shoulder pastures—Alps is their proper name—that he can use only through the short summer to graze his cattle and save the more of the valley-grown crop for winter feed. On the valley floor out next the

river he is threatened with inundations. At the border of the plain next the mountains he must beware of the avalanche. His sun rises late and sets early behind his mountain walls. He has few neighbors, and markets only at a distance over a difficult road. His home is undesirable in all respects except one: it shelters him admirably from pursuing or attacking foes. They can attack him only in one direction. His mountains are full of defensible positions. Knowledge of the paths, which he has and his enemy lacks, is important as nowhere else. The mountains transform him from a fugitive and a defeated man into one strong to resist, with the resistance now of desperation, for there is no escape.

Yet his greatest strength is the undesirability of his land! The men who would maintain possession of the best land in the world have always had to fight all comers to retain it. They keep who can! The mountaineer has but to keep what few men want. Only in the last century have mountains acquired their value as scenery. That alone has given value to their lands, markets for their crops, and roads and railroads where men had before to be content with sorry trails. Before, they had mainly served as a refuge for the dispossessed of better lands.

The Scotch Highlanders have a romantic name for courage and dash. Who has not heard of them? Who that put on the plaid would not be inspired to maintain the fame of the force? Yet in the World War the British soldiers who have made their exploits familiar to all the world have been the plainsmen of New Zealand, Canada, and Australia. The tales of the Scottish Border, where the bold Highlander defied the Saxon of the Lowlands,

raided his fields, and drove off his cattle into the hills, put things askew. The Highland Rob Roy had fitful enjoyment of a miserable refuge in the hills while the Saxon prospered on the fertile plains of the Lowlands. The Highlander shone as the defender of Lost Causes and the loser of his own. The Lowlands were his till the Saxon came, and the Saxon has had them ever since.

Fig. 63, Sant' Ambrogio oxcart. Beyond the Alps lies Italy, it is said, but not if you are crossing the St. Gotthard by pass or tunnel. Italian Switzerland comes first beyond the Alps there, canton Ticino, where the speech, the house, and many habits are Italian. From Italian Switzerland to Italy one makes the step without noticing, for those things changed where the climate changed, at the crest of the Alps. France and Italy use table wine that is served as a part of meals without charge. If you order wine in Switzerland you must pay for it. Not bread and butter they serve for food in Italy but bread, oil, and wine. Butter belongs in the green meadows of the north. A good deal of ordinary cheap wine.

1. Is it cheap wine or dear that would be shipped in a cask so large as this?

2. Why are the wheels so small? Consider the weight and the roads, too.

3. How are the oxen yoked? At least in southern Europe this is universal. Ask a driver why not put around their necks a yoke that will let them pull from the shoulder and he will answer that he never saw two steers push at each other with their shoulders.

Fig. 64, a court in Sant' Ambrogio.

1. How is it evident these are not wealthy people?
2. Have they leisure?
3. What are they doing? They spend a great deal of time outside the house preparing vegetables, or mixing some dish, or sewing.
4. What sort of pavement? Sant' Ambrogio is a poor little village on a hilltop. As the cobbles are rough two lines of smooth stone blocks are laid along the middle of the street to take the cart wheels.

These two Italian pictures are from the Po valley, not typical Mediterranean country. That begins here beyond the Apennines, but west of here in southern France is the true *Garrigue*, the country of the leathery-leaved thickets, the land of winter rain.

LEATHERY-LEAVED LANDSCAPES

Fig. 65, Garrigue landscape near Nîmes.

1. How much rain falls here in summer? See Fig. 56.
2. Is thicket a good word for such growths as these?

Only in the deeper, moister hollows do the trees grow somewhat taller. Of the wild plants a holly and a dwarf oak are the commonest, ranging from six to ten feet high. The ground is very dry and barren-looking, without grass and revealing innumerable fragments of the whitish limestone which forms the surface. Clouds of dust blow about and whiten the foliage. Here and there the pointed cypress shows its dark spire.

3. Would you suppose the ground was fertile, from its looks?

4. Can you imagine that the sun would glare strongly on these light-colored surfaces?

Fig. 66, the all-important olive which thrives in this environment.

1. Can you tell the shape and condition of the olive trunks? Compare them with pine trunks—how like and unlike?

2. What difficulty has this tree growing? (See page 34.)

3. Why should olive trunks be so gashed and split?

4. How much shade does the olive cast? Will it injure the barley?

5. Where did the stones of the wall come from?

The olive hunts up its own water, but the crop is a poor equivalent to those of well watered regions.

CHAPTER VI

WHAT THE EUROPEAN IS LIKE

HEAD LENGTH

Our ideas about race¹ are very confused. The most careless use of the word is as if it were the same as nationality: the French race, the English race. A nation may have several races within it. France certainly does. More often race is taken to mean the same thing as language, as Latin races, Teutonic races, and so on, because there are Latin and Teutonic families of languages. But that would make the American negroes of Teutonic race as they speak a Teutonic language. That is meant for an extreme case, but think of the others who speak English in the United States, people from almost every country in the world. It is obvious that they are not all of the same race. No more are the people of Germany, even those who speak German for their native tongue. A child learns the language spoken around him quite regardless of his race. What then is race? It is simply family enlarged, a group of families related by actual blood. The conception is complex in application because of the immense amount of intermingling all races—at any rate in Europe and America—have undergone. Europe has been more studied than any other part of the world. We know

¹ The following discussion of physical race is based on Ripley's *Races of Europe* (London, 1899), a superb work by an American scholar that is the standard on its subject.

how multiform have been the actual migrations, conquests, and colonizations of peoples there. A vast amount of study of European measurements and observations has made it clear that there are three races of men in that continent whose bodies show physical differences that have certainly come from three great strains of blood. These differences are in the shape of the head—cephalic index—stature, and complexion. Literally millions of measurements have been made in the last seventy years in Europe. The three races established are: the northern longheads, tall, blue-eyed, and flaxen-haired; the Mediterranean longheads, medium to short of stature, and dark of hair and eyes; and the Alpine broadheads, of medium stature and complexion. The maps show the main facts of their distribution as far as it has been studied.

“The form of the head is for all racial purposes best measured by what is known as the cephalic index. This is simply the breadth of the head above the ears expressed in percentage of its length from forehead to back.”² If a man’s head is eight inches long and seven inches wide, this index is said to be $7 \div 8$ or .88, meaning that the head is 88 per cent as wide as it is long. The measurement is made with calipers, or compasses with bent arms, allowing the points to touch opposite sides of a round body.

It is customary to distinguish very long heads as dolichocephalic, width less than 75 per cent of the length, medium heads as mesocephalic, width from 75 to 80 per cent of the length, and broad heads as brachycephalic, width over 80 per cent of the length. Our map draws the division lines about five per cent higher in order

² Ripley, p. 37.

to distinguish the facts of Europe better. The map should be tinted as directed at the bottom before trying to answer the questions that follow.

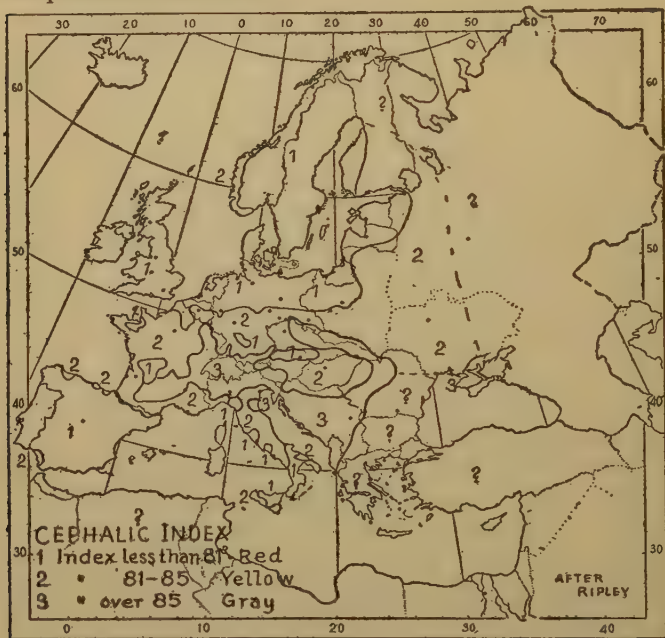


Fig. 39. Cephalic Index. After Ripley, *Races of Europe*, p. 53. Longheads, Midheads and Roundheads, divided five per cent above usual gradations (75 and 80). Prussia should be tinted in red bars, not solid red, as measures are uncertain. Tints should be very pale to allow boundaries to show through.

1. Which number on the map seems to represent the Alpine race?
2. In what countries does this race occur?

3. Name the mountain ranges on which the map shows Alpine broadheads.

4. On what two borders of the continent do we find the longheads?

5. What four countries of modern Europe are characteristically longheaded?

There is no reason to suppose the skull shape indicates intelligence. The customary phrase, "a longheaded man," is entirely metaphorical and refers to how far the man can see ahead rather than to the shape of his head.

6. What three countries are distinctly broadheaded?

7. How is Norway peculiar among northern countries?

8. Describe the distribution of head-shapes in France.

9. Give the facts for Germany, noting the printed comment under the map.

10. What eight countries have only one cephalic index on the map?

11. Does that probably mean that in that country all the heads are just alike?

This is, of course, hardly reasonable to suppose. As a matter of fact it only means that one particular type of index occurs there more than any other. It is quite the usual thing for all head-shapes to occur together, but some one shape is predominant. It does not need to occur with the majority of the population even, if it occur on more individuals than any other shape does. Thus 34 per cent longheads, 33 midheads, and 33 per cent broadheads would be represented as a longheaded region.

As far as head-shape indicates race the United Kingdom has one race prevalent all over. This is contrary to our usual conception, but Figs. 40 and 41 show the same unity.

We have paid too much attention in the past to the facts of language (Fig. 48). It appears that a substratum of one physical race underlies the whole British population, in spite of the many conquests by Romans, Germans, Danes, and Normans.

STATURE

Stature is much less inflexible than head-shape, which is regarded as well-nigh immutable. The measurements

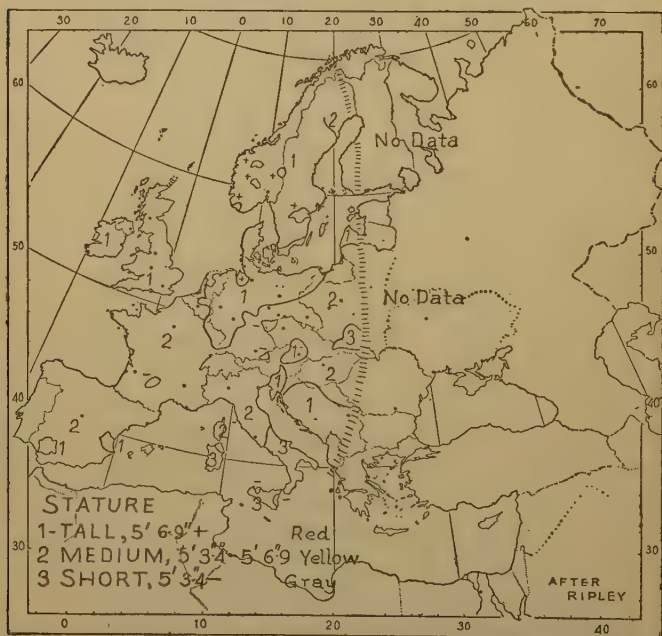


Fig. 40. The grades of Stature after Ripley, *Races of Europe*, page 97.

of a million recruits in the American Civil War showed that American offspring of European parents were taller than Europeans; that Americans born in the West averaged taller than Americans born in the East, both of Eastern American parents. Environment, in the new world and in the frontier parts of the new world, increases the stature. On the other hand malnutrition seems to stunt. It must be recognized, therefore, that the statures here mapped do not necessarily correspond to ancestral statures.

1. On what sea borders are the men mostly tall?
2. How high does "tall" mean on this map?
3. Are you as tall as that?
4. Would it be accounted tall in America?
5. On what sea are people mostly of mid-stature or short?
6. What is the height of the short people of this map?
7. What statures abound mostly on the "core" of Europe?
8. Locate nine "islands" or isolated spots of tall folks.
9. Locate four "islands" of mid-stature in Norway.
10. In what four countries does our map show but one type of stature?
11. Describe the distribution of stature in France and Spain.
12. What two countries have each three types of stature?
13. Are the British islands of one type of stature or several? How was it with head-shape?
14. Does Germany appear to be of one physical race or two?

15. On the ground of head-shape and stature which countries appear to be the best examples of the Northern race?

16. Do head-shape and stature agree for northern and southern Germany?

17. Do they for northern and southern Italy?

Just as with head-shapes it must not be forgotten that the statures shown on the map are predominant only. All sorts of statures occur in all countries, or, better, there is much variety in all countries.

COMPLEXION

As in the diagrams of head-shape and stature the facts of any locality are always complex. That is, blonds and brunets usually exist side by side, but they exist in very different proportions in different places. By blond is meant a person with blue eyes and flaxen hair, by brunet one with dark hair and brown or black eyes, since skin tint has proven harder to study.

1. Is the distribution of colors more or less even on this map than on Figs. 39 and 40?

2. What sea border is inhabited by blonds?

3. Which by brunets?

4. In what two regions do the mid-tint people live? There is grading within the tints, as may be expected.

5. On what coast of Great Britain would you expect to find most blonds?

6. If we followed out this thought what tint should we expect in central Africa? One must not make such assumptions hastily, however; the American Indian has spread over his two continents across three zones without any change of tint.

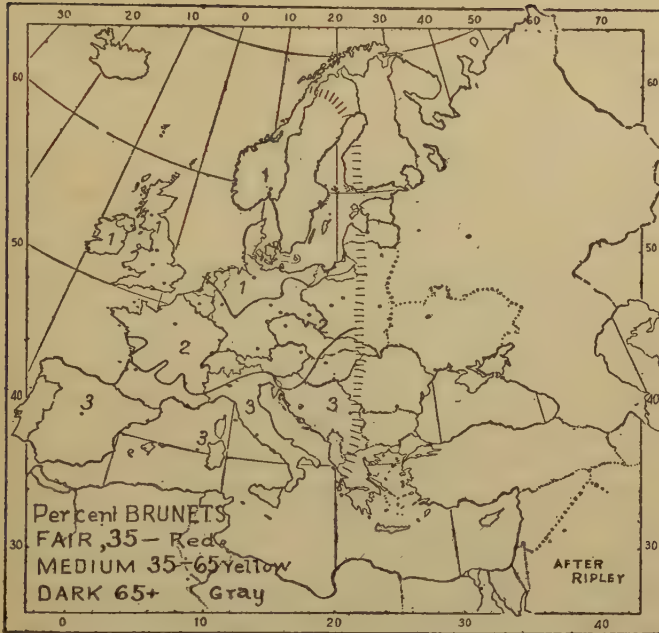


Fig. 41. Percentage of Brunets. After Ripley, *Races of Europe*, page 67.

7. Name ten countries that have one dominant complexion.

We are now ready to discriminate between the three physical races.

8. What countries have the fair, tall, northern longheads for their characteristic population? Do not include any that have them only in parts of the territory.

9. What countries have the short, dark, Mediterranean longheads for characteristic inhabitants?

10. Which have the mid-tint, mid-stature, Alpine roundheads for characteristic?

11. Describe the distribution of Northerns, Mediterraneans, and Alpines in Germany and France.

CULTURE

So far we have counted folks as so many human beings. But the geographer is interested in knowing what sort of human beings live in different countries. Are the people of Europe all of the same degree of culture? Of course not, but there are many difficulties in discriminating fairly between them.

Most nations regard themselves as more cultured, more highly civilized than other nations. This would make it very hard to apply any measure of culture—if there were one—to a group of nations that included our own, with any fairness. Two interesting experiences of the writer will illustrate. One was a Portuguese school in San Vicente, Cape Verde Islands. The lesson turned on the character and disposition of the English people. It appeared that the English were cruel and bloodthirsty. As evidence was cited the habit of English boys who differed in opinion of going off behind the school, as like as not under the escort and advice of some of the older boys, to beat each other about the face with their bare hands until their eyes were blackened and their noses bled. So, too, the grown-up people paid large sums of money to see savage, half-naked men fight with their fists for a prize. And the Americans had much the same habits. Prize

fighths there attracted great numbers of wealthy and influential people, the governors of many states never failing to attend! That was 1890, long before the Spanish War. The second was a schoolroom in Concord, Massachusetts, about ten years later. The teacher was bringing out the inherent savageness and brutality of the Spaniards. She cited the bull-fights as evidence; how the people enjoyed seeing the angry bull tearing open with his sharp horns poor old horses that had not spirit enough to escape, only to be slain in his turn by a highly trained and well armed man, who gave him equally little chance for his life, how the occasion was a holiday one, the day being Sunday or some other festival and the world of society turning out in its gayest attire to see the event, even the queen of Spain herself!

There is a good deal of reason to believe that Spaniards and Italians have a finer sense of tone and color than most European nations; that Germans have a zeal for minute, painstaking work, *laboriosity*, as they call it, which other nations do not equal; that French taste in many varied forms is so distinctive that it constitutes a national excellence. And almost every one who knows the Turk calls him a gentleman in the best sense of the term. But there is no way to measure quantitatively the cultural value of these things. We have no means of grading the development of the arts in different lands. If a man thought he could do it, probably no one would accept his values. *Fairness* is so essential a thing in any such comparison that there must exist a numerical basis for such studies before we can attach much importance to the results. This numerical basis should be something prepared before-

hand by the country concerned to establish facts quite unrelated to culture studies. Where shall we find such numerical data, so unbiased and reliable and yet in some degree indicative of culture? Now four things have been found that come near to satisfying these conditions. They are: the degree in which the people of a country share in elementary schooling, the extent to which railways are developed in proportion to the area of the country, the participation of a country in foreign commerce proportionately to the number of its people, and the use that people make of the mails.

Schooling for the people means opening up to them the world of books, the world's great storehouse of culture. Railroads function to increase the circulation of people, commodities, and ideas, to break down narrowness and provincialism. The use of the mails means contact with wider circles of men than those immediately about us and makes distinctly for the spread of culture. Commerce is the most effective means of breaking down the barriers between peoples and making progress universal. Nothing has had so great cultural significance for Japan and China as their opening up to the world of commerce, however painful China is finding some of her experiences. All of these things make for the spreading of ideas and the numerical basis on which to compare them is excellent. Indeed the development of statistics is itself indicative of culture. There are some few countries that practically have none and their culture is minimal. It is true that all of these data, except schooling, have a somewhat material cast, a reproach often made to modern culture in general. Indices of schooling, foreign commerce, railroads, and

mails have been made out for the countries of the world on the scale of 100, putting the highest degree observed at 100. From these a culture index has been derived by taking an average, giving schooling double weight.³ Switzerland was 100 in use of mails, Belgium in foreign commerce and railroads, and Australia and Canada in schooling since no European nation has extended enrollment in the common schools so widely as those two countries. The straight numerical averages are used in Fig. 42 and the scale reduced to 10, to eliminate small differences of figures that have no real significance.

The culture estimates resulting are certainly without the least bias. Allowances ought to be made at several points. They have purposely not been made in order that nothing subjective may enter into the result. The smallness of railroad development in the Netherlands is quite compensated by the great mileage of canals. In France, too, the rivers and canals in use amount to six thousand miles. The commerce of the German Empire is certainly underestimated and that of Belgium and Netherlands overstated by a good deal of German commerce that passes in and out through those countries. The Dutch figures have a worse defect than that: the values published are not modern values at all but are based on an old obsolete set of prices, so that the Dutch Commercial index is undoubtedly too high. The low railroad indices of Sweden and Denmark take no account of the great facilitation of travel in those countries by steamboat lines. This is also true in Norway, where the very low

³ Jefferson, *The Culture of the Nations*, Bul. Am. Geog. Society, April, 1911.

index, 20, results from the difficulty of railroad building in that rugged land and takes no account of the excellent system of "posting" over the roads (see Baedeker's Norway and Sweden, introduction) and the coast steamers.

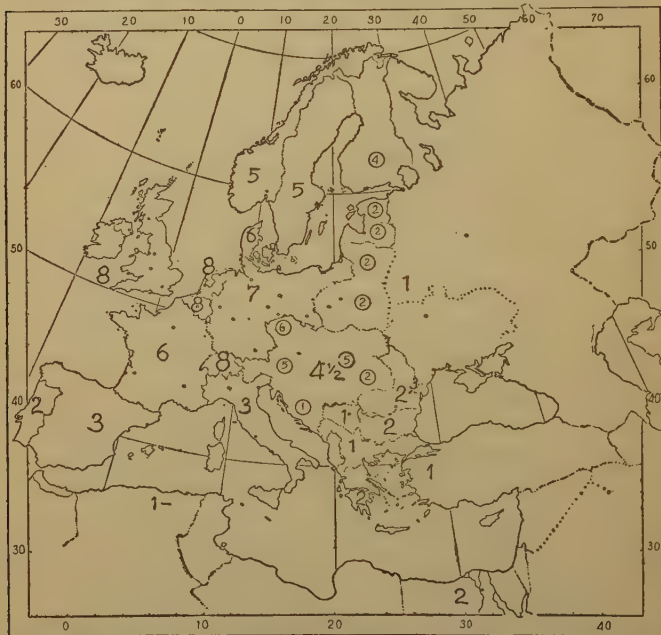


Fig. 42. Culture of European Nations on a scale of 10 for 1910, with estimates for the new countries in the circles. Color pale red countries above 4, yellow countries 2.1-4, and blue those under 2.1.



43 Swiss houses log cabins too—
see 19



44. Defending the Faith—avalanche
plow



45. Here T'ell lived—in Uri



46. Towering tenements on Lago
Maggiore

TABLE OF CULTURE INDICES A, SCHOOLING B, COMMERCE C,
RAILROADS D, AND MAILS E, FOR YEAR 1900

	A	B	C	D	E
Switzerland.....	85	80	95	72	100
Belgium.....	84	80	100	100	58
United Kingdom.....	83	90	80	76	77
Netherlands.....	77	85	100	56	58
German Empire.....	68	80	30	68	81
Denmark.....	65	65	80	52	61
France.....	56	70	42	48	49
Sweden.....	52	70	35	36	49
Norway.....	51	75	40	20	47
Austria-Hungary.....	45	70	13	40	33
Italy.....	33	47	16	36	20
Spain.....	28	45	13	19	16
Greece.....	24	45	11	12	8
Rumania.....	23	35	19	16	10
Portugal.....	16	20	11	16	11
Serbia.....	13	22	6	8	8
Russian Empire.....	12	20	4	7	8
Turkey.....	9	20	5	1	1
Bulgaria.....	21	...	...	...	...

In general it is surprising that the different indices run so much alike for all the countries, the notable case being the United Kingdom. Compare the urbanization figures at page 51.

1. What is the extreme range of values for the United Kingdom on a scale of 10? This in itself justifies the cultural significance of the study. The numbers agree well because they are based on a common reality, the culture of the nations involved.

2. Name the countries with culture index above 4 on Fig. 42. They are all those that you have tinted red, if you followed the directions on the diagram. They may be said to have a Teutonic grade of culture, since most of

the nations involved are of the so-called Teutonic races.

3. What countries have culture indices between 2.1 and 4? They are the ones you have colored yellow, Mediterranean culture, from their region.

4. What ones below 2.1? The east end of the Mediterranean is known as the Levant.

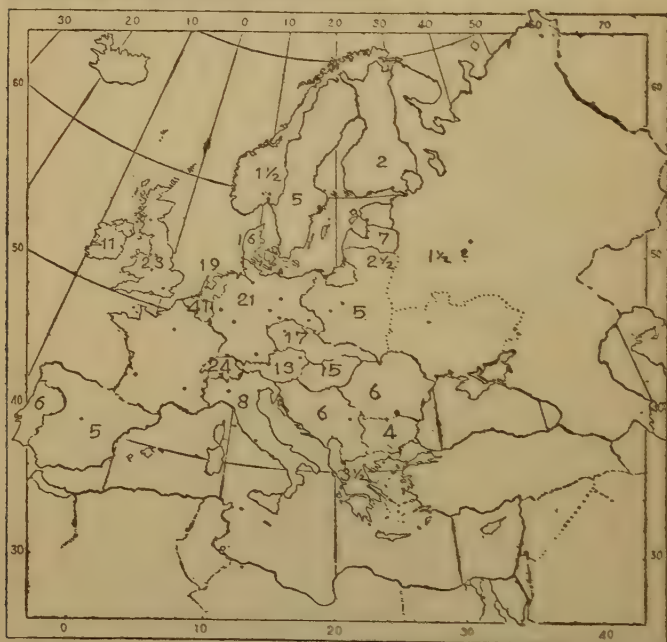


Fig. 47. Miles of railroad per 100 square miles of territory in 1919.

5. In what way does the map suggest that the north of France has a higher culture than the south, western Germany a higher than eastern, and northern Italy a higher than southern?

6. From what sea might one name the Teutonic culture?

This study of culture applied to conditions of 1900. Conditions are too unsettled today to make a new study profitable. A distressing after effect of the war is an increase of standing armies over most of the area. Europe today is more subdivided than in 1900. We counted nineteen countries then. There are twenty-nine today, omitting Luxembourg and a few smaller statelets. The average area of a country then—omitting Russia and Turkey—was 98,000 square miles; now it is 81,000. But a glance at the present railways will repay. Railways are represented on the map by the number of miles of line to a hundred square miles of territory.⁴

1. Why has Ireland only half the railroad development of Great Britain? It has less mountain areas.

2. Why should Switzerland show so high a development? I believe much of it is narrow gauge and some has cogwheels.

3. Has density of population anything to do with it?

4. How? Compare two regions, one having 50 people to the square mile and the other 100.

5. A quite fair consideration would increase the Dutch number. What is the consideration?

6. Is a group of Mediterranean countries evident?

LANGUAGE CLASSES

For the English phrase, "*The hedge is green,*"

A Dutchman would say, "*De haag is groen,*"

A German would say, "*Die Hecke ist grün.*"

⁴In the culture study of 1900, figures for Norway and Russia were multiplied by 4 and those for Sweden by 2 to allow for uninhabited space that needs no railway. This has not been done here.

Probably not one of them, if he spoke only his own language, would understand what the others said. Yet to the eye it is evident that all four words are essentially alike. This likeness of words—and grammar—is what we have in mind when we say that the English, Dutch, and German belong to the Teutonic class of the Indo-European family of languages. In the same way within the Romance languages to express the idea, "The horse drinks water,"

The Spaniard says, "*El caballo bebe agua*,"

The Italian says, "*Il cavallo beve acqua*,"

And the Frenchman, "*Le cheval boit de l'eau*."

Here again the four words used by each nation are visibly the same, though perhaps *eau* does not seem much like *agua*. In most places where the Roman soldiers went and established Roman government we find the people now speaking languages related in this way, and we say they are Romance languages, or belong to the Romance class. Of course these examples are rather unusual. The languages of one class are not always so much alike. In order to express the idea, "My dog loves me,"

A Spaniard says, "*Mi perro me quiere*,"

But a Frenchman puts it, "*Mon chien m'aime*."

In this case each has a different word for *dog* and for *loves*. But it is still true that every page of French written contains very many words that are essentially the same words that Italians, Portuguese, Spaniards, and Rumanians would use, with small differences of form, and the ideas are generally expressed in about the same way.

The European branch of the great Indo-European family of languages has five such classes and a subclass

of Scandinavian, for each of which a color is recommended on our map:

Keltic—Scotch Gaelic 1, Irish Gaelic 2, Welsh 3, Breton 4; black.

Teutonic—English 1, Dutch 2, German 3; red.

Scandinavian—Swedish 1, Icelandic 2, Danish 3; red bars.

Slavonic—Polish 1, Bohemian and others 2, Serbian and others 3, Russian 4, Bulgarian 5; green. Lithuanian goes with the Slavonic class.

Hellenic—Greek G, Albanian A; purple.

Romance—French 1, Portuguese 2, Spanish 3, Italian 4, Rumanian 5; blue.

It is not so easy to show the relationship that makes the various classes of languages members of one family as that which unites the members of a class. There are not so many words in common, and they have been changed more, yet there are laws for these changes, and the relationships can be traced with certainty. English *hound* is really the same word as the Latin *canis*, *tooth* the same as *dentem*, *father* the same as *pater*. The words that show the likeness are all common words that are in most familiar use in all languages and in every stage of society. While details belong to students of languages it must suffice for us to know that these students are quite agreed as to the relations described. It is not theoretical but established beyond any possible doubt. The general reader who wants more on this subject would do well to consult Max Müller's *Lectures on the Science of Language*, a very clear account. The easiest illustration is the set of numerals from one to ten:

Irish	Dutch	Danish	Italian	Russian	Hungarian	Spanish
1 aon	een	en	uno	odin	egy	uno
2 do	twee	to	due	twa	ket	dos
3 tri	drie	tre	tre	tri	harom	tres
4 ceathair	vier	fire	quattro	cetyre	negy	cuatro
5 cuig	vifj	fem	cinque	piat'	ött	cinco
6 she	zes	seks	sei	sest'	hat	seis
7 sheacht	zeven	syv	sette	sem'	het	siete
8 ocht	acht	otte	otto	osm'	njolcz	ocho
9 naoi	negen	ni	nove	deviat'	kilencz	nueve
10 deich	tien	ti	dieci	desiat'	tiz	diez

These represent all the classes but the Hellenic with one duplication and one outsider. Which is which?

1. Which numbers are easiest for us to make out?
2. How many of the Italian numbers are pretty transparent?
3. How many of the Russian numbers are intelligible?
4. How many of the Hungarian numbers seem to make sense? Why?
5. Which two sets of numbers are most alike? Why?
6. Which two come next in similarity? Explain.

Besides the Indo-European languages, our map shows the Basque in the Pyrenees, which is not like any other in Europe, and three Turanian ones, Finnish, Hungarian, and Turkish. Most of the languages of this family belong in Asia, and we know historically when the people who speak two of the European Turanian languages—namely, the Hungarians and the Turks—came into Europe. In that case race and language agree very well, but it is not safe to assume that it is always so. For the Bulgarians, too, are known to be Tartars who came into Europe from Asia in historic times; but they have adopted a Slavonic language. This does not, of course, make them Slavonic

of race. The French are not of the same race as the Italians, but like them they speak a Romance tongue, which was carried to them by the soldiers of old Rome. The same Roman soldiers carried their language into Britain, but it has been lost there utterly. When the German tribe of Franks, who gave modern France her name, conquered the Romance-speaking people, they learned the language of the people they had conquered.

Language is no evidence of race. George Moore, Patrick O'Brien, and Theodore Koslowski may all speak excellent English and come of diverse races. A child speaks the language of those among whom it grows up.

1. How many different languages does our map show?
2. Which class of languages is spoken by people in four separated, isolated groups?
3. Which class has four languages spoken in contiguous regions and one isolated?
4. What two languages are spoken in two different countries as the principal language of each?
5. What two languages are spoken each in four different countries?
6. What language is spoken in five different countries?
7. What three languages have recently come into their own?
8. Is there any language in Europe without a country? —one that is not the official language of any country?
9. What is the official language of Switzerland? Of Belgium?
10. We all know what a *slave* is, but the word is the name of the east European peoples who speak Slavic



Fig. 48. Language Classes of Europe. Partly from Berghaus, *Physikalischer Atlas* (1886), Pl. 67, where languages are wrongly called peoples. The map is rough. For details see Dominian, *Bul. Am. Geog. Soc.*, June, 1915, p. 401. Small patches in East: + for Finnish, one accent for Turkish, two for German, R for Rumanian, Southern tip of Crimea Turkish.

tongues. How have we come to adopt their name to mean *unfree*? Look it up in dictionaries and encyclopedias.

11. What language is probably spoken by most European people? (See Fig. 6.)

12. What five languages are mapped as spoken in

Russia? These are only the most important ones. Do you see the relation between these two questions?

13. What six languages are spoken in France?

14. In what three countries does our map show only one language each?

15. Is a man probably a Frenchman if his native language is French?

16. Does a native Russian probably speak Russian?

As material for a little study and comparison of European languages, the episode of the loaves and fishes—Matthew 14—is given here in eleven languages. To make identification of phrases easier the story has been divided into 21 parts, separately marked and numbered, and words have been placed in the *English* order, since attention can hardly be called to more than *vocabulary* here. But words changed from their natural order are always marked with a star: *Jésus leur dit* appears as *Jésus dit leur**; *Traédemelos acá* appears as *Traéd los* acá* me**. Quite unjustifiable changes, of course, but necessary if languages are to be compared by those who have no linguistic knowledge.

THE LOAVES AND FISHES

(1) But Jesus said to them, (2) They not* (have) need (3) depart*; (4) give ye them to eat. (5) And they said unto-him, (6) We have (not) here but five (7) loaves and two fishes. (8) And he said, Bring them hither to-me. (9) And he commanded the multitude (10) to-sit-down on the grass; (11) and (he) took the five loaves and the two fishes, (12) and looking up to heaven, (13) he blessed, and brake; (14) and gave the loaves to his disciples, (15)

and the disciples to the multitude. (16) And they did-eat all*, and were filled: (17) and they-took up of the fragments that remained (18) twelve baskets full. (19) And they that had eaten were (20) about five thousand men, (21) besides women and children.

Dutch

(1) Maar Jesus zeide tot-hen, (2) Het-hun* niet* is van-noode (3) te-gaan; (4) geeft gij hun te eten. (5) Doch zij zeiden tot-hem, (6) Wij hebben niet* hier dan vijf (7) brooden en twee visschen. (8) En hij zeide; Brengt dezelve hier mij*. (9) En Hij beval de schaaren (10) neder-te-zitten op het gras; (11) en — nam de vijf brooden en de twee visschen, (12) en opwaarts ziende naar den hemel, (13) zegende dezelve en als hij ze gebroken-had* (14) gaf hij de brooden den discipelen, (15) en de discipelen gaven ze de schaaren. (16) En zij aten allen, en werden verzadigt: (17) en ze-namen op, der brokken het overschot (18) twaalf korven volle*. (19) Die nu hadden* gegeten waren (20) omtrent vijf tuizend mannen, (21) zonder de vrouwen en kinderen.

German

(1) Aber Jesus sprach zu-ihnen, (2) Es nicht ist* noth (3) dass-sie-hingehen; (4) gebt ihr ihnen zu essen. (5) — Sie sprachen, — (6) Wir haben nichts* hier denn fünf (7) brote und zwei fische. (8) Und er sprach, Bringet sie* her* mir*. (9) Und er hiess das volk (10) sich-lagern auf das gras; (11) und — nahm die fünf brote und die zwei fische, (12) — sahe auf den himmel, (13) und dankte, und brach es (14) und gab die brote den

jüngern, (15) und die jünger gaben sie dem volk. (16) Und sie assen alle, and waren satt: (17) und hoben auf von brocken* was übrig blieb (18) zwölf körbe voll. (19) Die hatten* gegessen derer waren (20) bei fünf tausend mann, (21) ohne weiber und kinder.

Danish

(1) Men Jesus sagde til dem, (2) De ikke* have behov (3) at-gaae-bort; (4) giver I dem at-aede. (5) Men de sagde til-ham, (6) Vi have ikke* her uden fem (7) bröd og to fiske. (8) Men han sagde Henter dem* hid* mig*. (9) Og han böd folket (10) Saette-signed paa graeset; (11) og tog de fem bröd og de to fiske, (12) Saae op til himmelen, (13) og velsignede-dem, og han bröd-dem (14) og gav sine disciple brodene, (15) men disciplene gave folket dem. (16) Og de aade all, og blaeve maette: (17) og de opsamtede af stykkerne* de blev tilovers (18) tolvte kurve fulde. (19) Men de som aade vare (20) henved fem tusinde maend, (21) foruden quinder og börn.

Icelandic

(1) En Jesus sagdhi vidh-tha, (2) Their* ekki*—thurfa (3) adh-fara-burt; (4) gefidh their theim adh eta. (5) En their segja vidh hann, (6) Ver höfum ekki* her nema fimm (7) braudh og tvo fiska. (8) En hann sagdhi, Faeridh thadh* hingadh* mer*. (9) Og hann baudh mannfjöldanum (10) adh setjast nidhur i grasidh; (11) og tok fimm* braudhin* og tvo fiskana*, (12) leit til himins, (13) og blessadhi, (14) og er hann hafdhi brotidh braudhin (15) fekk hann leirisveinum mannfjöldanum. (16) Og allir neyttu, og urdhu mettir (17) og their toku upp brotnu

braudhin er af gengu, (18) tolf karfir fullar. (19) En their sem neytt höfdu voru (20) her um bil fimm thusund karlmenn, (21) auk kvenna og barna.

Greek

(1) Ho-de Iesus eipen autois, (2) — Ouk echousin* chreian* (3) apelthein; (4) dote humeis* autois phagein. (5) De hoi* legousin auto, (6) Echoumen ouk* hode ei-me pente (7) artous kai duo ichthuas. (8) De ho* eipe, Pherete autous* hode* moi*. (9) Kai keleusas tous ochlous (10) anaklithenai epi tous chortous, (11) kai labon tous pente artous kai tous duo ichthuas, (12) anablepsas eis ton ouranon, (13) eulogese, kai klasas, (14) edoke tous artous* tois mathetais, (15) de hoi* mathetai tois ochlois. (16) Kai ephagon pantes, kai echortasthesan; (17) kai eran ton klasmaton* to perisseuon (18) dodeka kophinous plereis. (19) De hoi* esthiontes esan (20) hosei* pentakischilioi andres*, (21) choris gunaikon kai paidion.

Italian

(1) Ma Gesu disse loro, (2) Loro* non e bisogno (3) d'andarsene; (4) date voi* lor da mangiare. (5) Ed essi dissero gli*, (6) Noi abbiamo non* qui senon cinque (7) pani e due pesci. (8) Ed egli disse, Recate-gli-qua* mi. (9) E comando que le turbe (10) si-coricassero sopra l'erba; (11) poi prese i cinque pani ed i due pesci, (12) e, levati gli occhi al cielo, (13) fece la bendizione, é rotti, (14) diede i pani* a' discepoli, (15) ed i discepoli alle turbe. (16) E mangiarono tutti*, e furono saziati: (17) poi levarono de' pezzi* l'avanzo (18) dodici corbelli pieni.

(19) E coloro ch'aveano mangiato erano (20) intorno-a cinque mila uomini, (21) altr' alle-donne ed i fanciulli.

Spanish

(1) Y Jesus dijo les*, (2)—No tienen necesidad (3) de-irse; (4) dad vosotros* les* de comer. (5) Y ellos dijeron, (6) Tenemos no* aqui sino cinco (7) panes y dos peces. (8) Y el dijo les*, Traed los* acá* me*. (9) Y mandando á las multitudes (10) rescostarse sobre la yerba; (11) y tomando los cinco panes y los dos peces, (12) alzando los ojos al cielo, (13) bendijo, y rompiendo, (14) dió los panes* a los discipulos, (15) y los discipulos á las multitudes. (16) Y comieron todos, y se-hartaron: (17) y alzaron los pedazos* lo que sobró (18) doce esportones llenos. (19) Y los que comieron fueron (20) como cinco mil varones*, (21) sin las mujeres y muchachos.

Portuguese

(1) Porem* Jesus disse lhes*, (2) Nao e mister (3) que vao; (4) dae vos* lhes* de comer. (5) Entao elles disseram lhe*, (6) Temos nao* aqui senao cinco (7) paes e dois peixes. (8) E elle disse, Trazei os* aqui* me*. (9) E mandando que a multidao (10) se-assentasse sobre a herva, (11) e tomando os cinco paes e os dois peixes, (12) e erguendo os olhos ao céu, (13) os abençoou, e partindo, (14) deu os paes* aos discipulos, (15) e os discipulos a multidao. (16) E comeram todos e saciaramse: (17) e levantaram dos pedaços que sobejaram, (18) doze alcofas cheias. (19) E os que comeram foran (20) quasi cinco mil homens, (21) akem das mulheres e creanças.

French

(1) Mais Jésus dit leur*, (2) Il n' pas* est* nécessaire (3) qu'ils-y-aillent; (4) donnez vous-même* leur* à manger. (5) Et ils dirent lui*, (6) Nous avons n'* ici que cinq (7) pains et deux poissons. (8) Et il dit, Apportez les* ici* moi*. (9) Et après avoir commandé que le peuple (10) s'assit sur l'herbe, (11) il prit les cinq pains et les deux poissons, (12) et levant les yeux au ciel, (13) il rendit grâces, et les ayant rompu, (14) il donna les pains* aux disciples, (15) et les disciples donnèrent les* au peuple. (16) Tous en mangèrent, et furent rassasiés: (17) et on emporta des morceaux qui restèrent (18) douze paniers pleins*. (19) Et ceux qui avaient mangé étaient (20) environ cinq mille hommes, (21) sans compter les femmes et les petits-enfants.

Rumanian

(1) Iar Iisus zise le*, (2) N'au trebuinta (3) sa-se-duca; (4) dati voi* le* sa manance. (5) Dar dansii zic ii. (6) Nu avem aci decat cinci (7) pani si doi pesti. (8) Si le zise, Aduceti acestea aci* mi*. (9) Si poruncind ca gloatele (10) sa-seaza-la-masa pe verdeata, (11) luand cele cinci pani si sei doi pesti, (12) cautand spre cer, (13) binecuvanta, si frangand (14) dete panile* ucenecilor, (15) iar ucenicii gloatelor. (16) Si mancara toate, si se saturara: (17) si stransera de faramituri* prisosul (18) douaspezeze cosuri pline. (19) Iar cei care mancarea eran (20) ca la cinci mii barbati*, (21) afara-de femei si copii.

Copy the eleven versions of section 7, one under another.

1. Can you find two groups of five words for *fishes*, very much alike?
2. What two classes of language do they occur in?
3. What language has a lonesome word for *fish*?
4. Report for *loaves* by language classes.
5. Is there a Romance word for *and*?
6. Do the words for *and* separate the Teutonic from the Scandinavian languages?
7. In the 10th section collect the Teutonic phrases for *on the grass*. Compare the Scandinavian phrases—two words each time. The *the* is fastened on at the end of the word, a *postpositive* article. Can you find one or two more examples of this Scandinavian habit?
8. Does the Greek produce forms similar to those of the other languages?
9. Find some Greek numerals that are fairly like the other numerals.
10. Comparing the versions of section 1, compare the Romance words for *said*.
11. How is it with *said* in Teutonic and Scandinavian tongues?
12. Comment on the words for *woman*. Scandinavian and Greek really alike.
13. Compare the words for *full* in section 18.
14. Do the languages fall into three classes in their words for *full*?
15. What light do we get from the word *twelve*?
16. Study *give* and *to eat* in section 4.
17. What do you learn from section 12?
18. Have you made out in these studies a close resemblance of two of the Romance tongues?

19. Are any of the others equally like?

"THREE" IN 27 LANGUAGES

Figure 49 illustrates still more widely the way in which the tongues of Europe fall into classes by mapping the variations of the word *three* in principal use.



Fig. 49. The word "three" in the principal twenty-seven European languages, indicating some important speech boundaries that do not agree with political boundaries.

The spelling of these words is each on its own plan, so they

do not give much idea of the pronunciation. *Hiru* in the Pyrenees, in the Basque language, is not Turanian nor Indo-European; indeed its relationship to any other language is uncertain. Its word for *three* has quite this air of exclusiveness!

1. How many of these words seem much alike?
2. How many and what ones are unlike the others?
3. Why should there be this difference?
4. Give the Keltic words for *three*.
5. Give the Slavonic words.
6. The Scandinavian words.
7. The Romance words.
8. The Teutonic words.
9. Which class has the greatest internal differences?

RACE AND LANGUAGE

In the discussion of Figs. 39, 40, and 41 we have made out that the United Kingdom, Denmark, Sweden, most of Holland and all but the west of Norway were predominately inhabited by the Northern race of men, long-headed, tall and fair, and so is the north of Germany and some of the Baltic parts of Russia. In France and Switzerland, most of Germany and Austria-Hungary, and much of Italy the Alpine race predominates, with broad skulls, mid-stature, and mid-complexion. The Mediterraneans prevail in Spain and Portugal and many southern parts of Italy, of long heads, but short to middle stature and middle tint. We now see that the divisions between languages do not at all coincide with these divisions of the physical race. There is one curious exception.

Germany is divided in speech into High German in

the south and Low German in the north, roughly along the same lines that separate the races. The northern long-heads in Germany speak Low German, and High German is spoken by the broad-headed Alpine people of the south.

Our studies of race and language show that our everyday conception of race is very careless and misleading. What do we mean when we say, "He is French"? Commonly we mean that his mother tongue is French. But Rousseau's mother tongue was French; yet he was Swiss, like the German-speaking Pestalozzi. Switzerland is the most interesting of all countries from this point of view. There is no Swiss language. French, German, and Italian are the languages of the land, if we may leave out of account the few Roumansch-speakers of the Grisons. It would seem as if cultured people must lean toward Paris, Berlin, and Milan, especially when we see the news stands displaying in Geneva the *Paris Matin*, in Berne the *Berliner Tageblatt*, in Ticino the *Corriere della Sera* of Milan. Yet all Swiss students tell us that the "heart is always Swiss." There are no German-Swiss, no French-Swiss, only German-speaking and French-speaking Swiss! The inhabitants of Ticino, for instance, do not read the *Corriere della Sera*, but a local paper sent them by mail, written and printed in the canton with more or less of the local dialect of Italian. Italian school books call Ticino geographically *Italian* because the people speak Italian! So also the French *Nice* and *Corsica*.

There is a good deal in language. Probably a man who has French for mother tongue *is* French, but we have seen that it is no safe test. The essential is that he must be of a French cast of thought. As the American humorist put

it when he said that Boston was a state of mind, so to be French or German or Turkish is to be of a certain frame of mind.⁵

RELIGION

1. How might we group these four religions as two?
2. How many countries are represented as of only one religion? Name the countries. As a matter of fact there is no country in Europe with only one religion, that is, with no adherents to any other. The map shows only the religions that predominate for a region. It is not possible to compare church memberships, since membership varies so much in meaning in different organizations that it has no common significance. Some churches count only those who attend or contribute, others count the whole family of any person who is a member. The map tells us that most English and Welsh are Protestants, though the Catholic church reports nearly two million adherents there.
3. What is the distribution of religions in Germany, Switzerland, and Russia?
4. Name the Protestant county in Ireland. That is about the place where the new boundary of the Irish Free State is to be drawn. As a religious boundary it is old and, of course, crooked. Why? Another description of that corner of Ireland is *Scotch-Irish*.
5. Compare the religion of the shores of the North Sea and that of the Mediterranean.

⁵The student who is interested should read Ripley, *Races of Europe*, p. 368, "The Jews and Semites." He shows the Jews to be not a physical race at all, but a people, the social product of an ideal, p. 400.

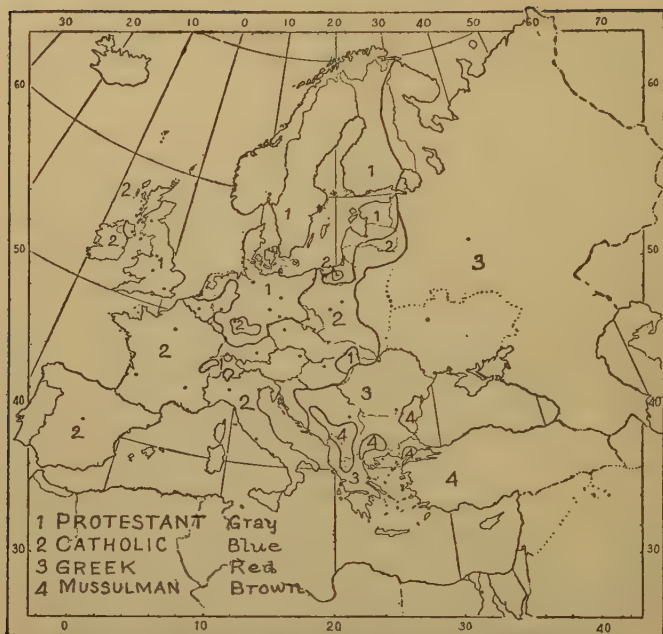


Fig. 50. The chief religions of Europe, after Berghaus.

6. How many of these religions have a capital city? What are these cities?

7. How many of them have no capital? Why not?

8. Divide Europe roughly into four quarters by religions and state the religion of each.

9. Name the Catholic countries of Europe in order of probable numbers.

10. Name the Greek church countries.

11. Name the Protestant countries.

12. What countries in Europe do not have a state church? You may learn by consulting the *Statesman's Yearbook* for each country.

13. How on the showing of this map do you explain that Protestants are a little more numerous in Switzerland than Catholics?

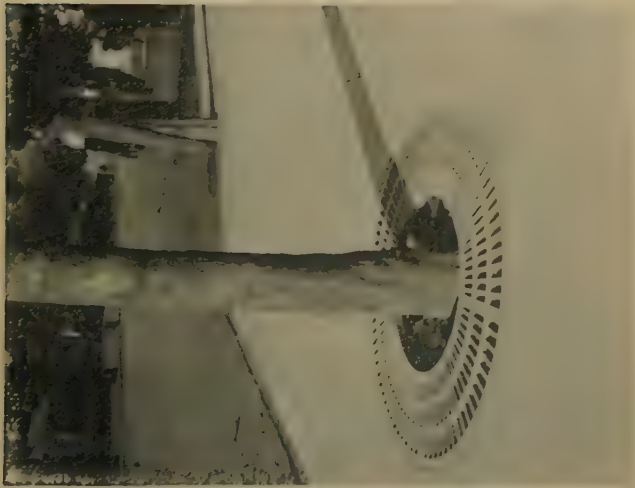
14. What countries have three religions represented?

15. Explain the distribution of religions in the countries named in answering 14.

CHAPTER VII

CLIMATE

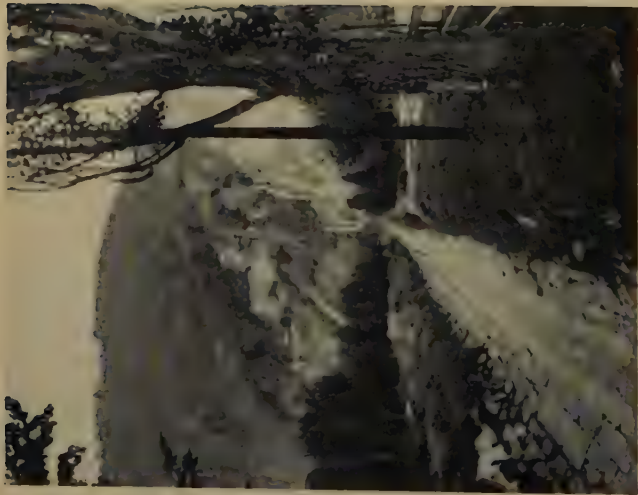
Now that we have some acquaintance with the people of Europe, we must look at the climates to which they must adjust their lives. Climate is by no means so decisive in its effect on man as has been supposed. The mass of mankind takes its climate rather philosophically. Europeans are very instructive to Americans in this respect. Nothing is more astonishing to us than to see the English enjoying a ride on the outside of a coach in a drizzling rain, or the French and Italians eating their breakfast in rooms with a temperature of 45° Fahrenheit. Darwin tells of Chileans who slept out comfortably all night while drenched with rain, and naked Fuegians who perspired uncomfortably at the outskirts of a group of English sailors shivering about a fire. There is no doubt natural man takes his weather exceedingly philosophically and we must have civilized ourselves into a very delicate condition to be so sensitive to weather as we have become. The rich go to the Mediterranean or to the Nile in winter and to the mountains in summer, if they are idle rich; but that doesn't touch the mass of mankind. No place in Europe is too cold to live in—probably no place in the world is, nor is any place too hot. Neither too wet nor too dry. Climate hasn't the rôle there of deciding where people shall live, if it has anywhere in the world. Climate, however, is full of circumstances to be reckoned with, of challenges that one man accepts and another passes without per-



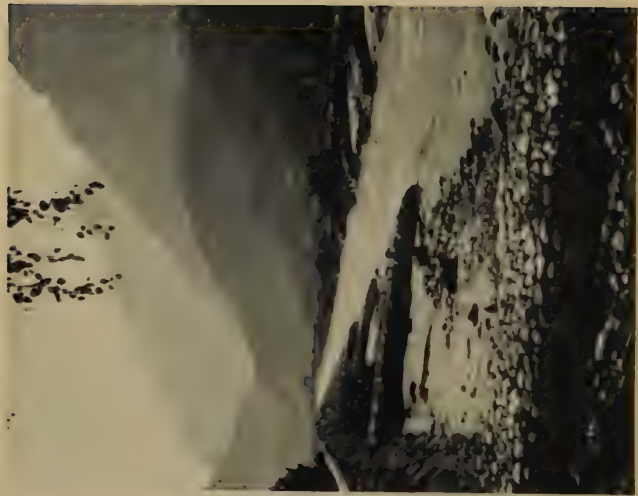
51. To loosen dirt around it in spring



52. Take a good French loaf from its nail



53. Taming the Swiss wildbach (torrent)



54. The Aar runs corrected

ceiving, of controls that shape occupations into varied forms. On the west coast of Norway they dry hay on hurdles, for it is too wet to dry it on the ground. Thirty miles farther east the hurdle is not in use, nor needed. That is definite. If you want to dry hay where it is so wet you must lift it off the ground. The wooden shoe is evident enough in France and England as well as in Holland in wet weather, even in northern Spain.

Greece and Italy do not need it. The people of Athens frolic like children in snow that really covers the ground. Usually their few snows melt as they fall. Up on the Esplanade de la Tourette at Marseilles, where you have so good a view of the basin and the old port, you may see them making rope in the open air in May. But we must not yield to the common looseness of climatic argument that finds the roofless theaters of antiquity an outgrowth of dry climate, for opera at Rome is not sung in the Coliseum but in a theater much like those of London and Stockholm. The stadia we are building in our wet climates are better mates for classic amphitheaters than our opera houses.

On crops the climatic controls are strongly decisive, sugar cane here, maize there, olive trees in this locality, oranges in that, and pine trees in another. Here you will grow wheat, *and eat it*, and there oats shall be your portion. For geography it is especially for this influence on things that grow that climate must be studied. And chiefly influential among elements of climate is

RAINFALL

1. On what sort of places does the excessive rain fall? (See Fig. 14.)

2. Is there more of the abundant rainfall in western or in eastern Europe?

3. Where do you note abundant rainfall on low ground?

4. Would you say, from the appearance of the map, that easterly or westerly winds brought the moisture to Europe?

5. Are east-facing or west-facing shores the rainier?
How many illustrations do you find of this?

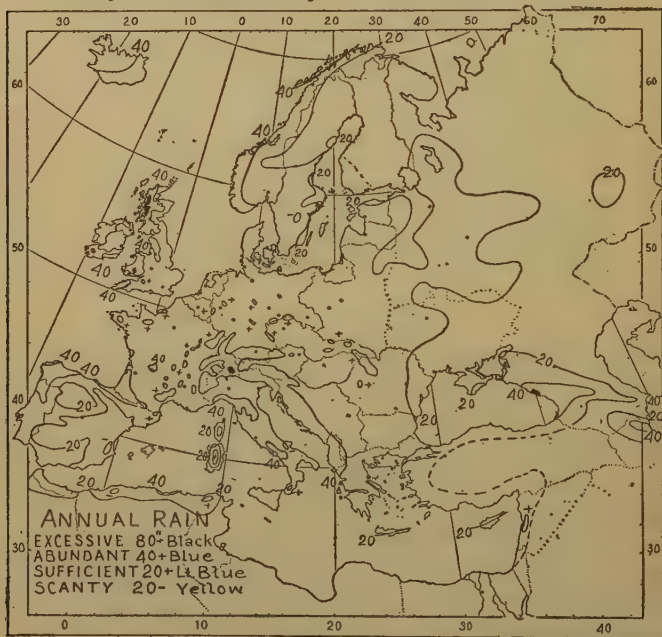


Fig. 55. Annual rainfall in Europe in inches. After Reyer.

6. On which side of their land masses do the areas of scanty rain occur?

7. Compare the changes in the amount of rainfall across the Iberian peninsula on a northwest-southeast line with those found across Scandinavia on a southwest-northeast line.

8. What changes of population-density are associated with diminution of rainfall in Sweden? This is a fine illustration of the danger of basing conclusions on single lines of evidence. All that we have a right to say is that from the accordance of the rainfall and population maps *it looks as if* it was too dry for many folks to live in north-east Sweden. No other evidence of it than this rain map! Woods abound up there and the rivers discharge plenty of water, which are just as good evidences of rainfall as rain gauges.

All rainfall maps made by meteorologists—and we are indebted to them for almost all the rainfall maps there are—depend upon gauge measurements for their portrayal of rainfall. In mountain regions gauges, which necessarily have to be kept where some one lives, in order to read them after every rain, are thereby located in the valleys. But since valleys quite usually have less rainfall than the uplands on either side of them, the valley gauge readings depict the rainfall as lighter, and at times much lighter than it actually is over the greater part of the adjacent country. Engineers studying water supply in mountainous regions have long been aware of this, for their measurements of the waters discharged by rivers in mountainous country often show more water flowing away in the river than fell—according to the rain gauges—on the watershed. Of course it should be very much less because much water evaporates into the air directly and a

very large amount passes into the air through the plants in their growth, neither of which portions ever reaches the river.

Axel Wallen¹ has estimated the rainfall of the Swedish mountains from the flow of the rivers to be over twenty inches pretty well up to the northern boundary of the country. The importance of this correction is in the warning it holds out with regard to climatic explanations in general. According to widely published rain maps,² northern Sweden had scanty rain. According to good population maps it had scanty population, *therefore* it was too dry for many people to live there! No: it merely looked so as far as the rainfall map showed the facts. There are certain inevitable consequences of a dry climate which should be verified. Do the plants of the region show the effects of drought, and do its lakes and rivers show it too? In this case they do not.

9. Where do France and Germany have their abundant rain?

10. Compare the distribution of rainfall in Asia Minor and in the Iberian Peninsula.

11. What grades of population density correspond to what grades of rainfall in the Iberian Peninsula?

12. In most parts of Europe what amounts of rainfall are provided for the scanty population?

13. What is a more logical way of putting this relation?

14. What two countries in Europe suffer from drought?

15. Does Europe appear to you rainy or rather dry?

¹ *Geografiska Annaler*, 1923, Häft I, p. 72.

² Mohn's in Haffner og Werenskiold, *Norges Geografi*, (Kristiania, 1912), p. 105, and Bartholomew's *Atlas*, and Reyer,

16. Is eastern or western Greece the rainier? Athens has sixteen inches of rain a year.

17. In what countries in Europe is it most likely too dry for grass? Compare Fig. 9 for the distribution of people.

It is evident that the prevailing west winds bring moisture to Europe from the Atlantic, condensed in rain and fogs by uplift on mountain slopes as well as by working upward within the cyclonic disturbances that sweep across mountains and plains alike. In rainfall as in population Europe faces west. In general its rainfall is greatest close to the eastern border of each water-body. But it matters whether the rain falls mostly in summer or in winter or is evenly distributed through the year.

The rains of the three summer months, June, July, and August are shown on Fig. 56. As three months is a quarter-year, ten inches on this map correspond to forty on the map of annual rainfall, and so on.

1. Does Europe face distinctly westward on this map?

2. Do the westerly winds blow on the Mediterranean in these months?

3. Give the grounds for your statement.

4. Name seven mountain masses that appear to be especially rainy in the summer.

5. Why has Ireland less rainfall than Wales?

6. What is the only type of rainfall to occur south of the 42nd parallel?

7. What causes the condensation of moisture on the Caucasus mainly? What causes most of the Russian rainfall?

8. Describe the distribution of rain in Germany.

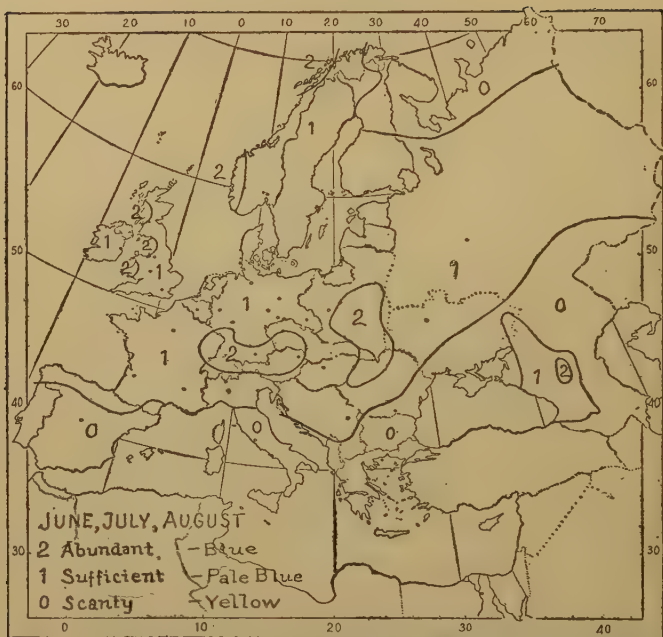


Fig. 56. Summer rainfall. After Supan. Excessive rainfall, 80 inches a year, 20 in three months, does not occur except in tiny mountain areas, not here mapped.

9. About how great a part of Europe has rain enough in summer?

10. Compare the rainfall of the three physical provinces in a general way.

The rain that falls in the winter months, December, January, and February, is indicated on Fig. 57.

1. How does Europe face in the matter of winter rainfall? Winter is the season of the strong west winds.

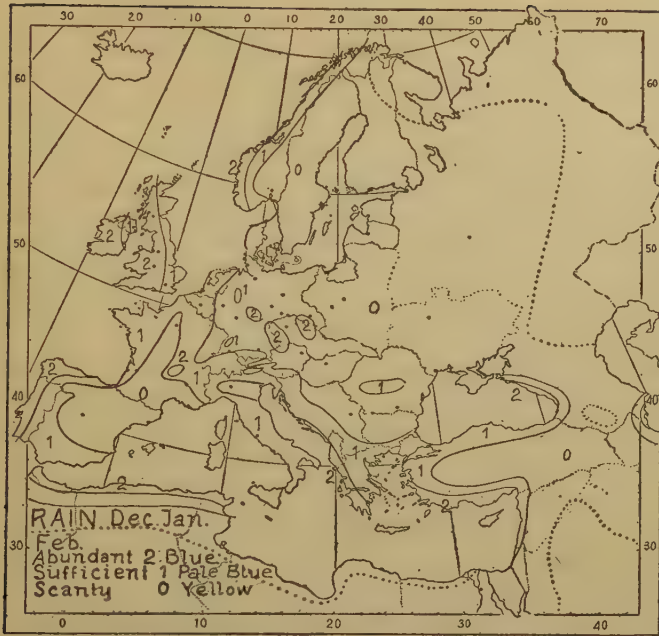


Fig. 57. Winter rainfall. After Supan. Excessive rain falls only on tiny mountain areas.

2. Why is this called precipitation rather than rainfall?
3. Does the winter find the west wind blowing on the Mediterranean?
4. What proportion of Europe has rain enough in winter?
5. Describe the rainfall of Sweden in winter.
6. Describe the rainfall of Germany in winter. When does Germany get her rain?

7. At what season do the British Islands get their rain?

8. What are the chief countries to get their rainfall in winter?

9. Compare the summer and winter rainfall of Greece.

Winter rains fall characteristically on strips bordering the sea. They do not occur far inland. In summer on the contrary they stretch across the whole core of Europe into Asia. The Mediterranean has almost all of its rain in the winter months. The effect of this on vegetation and the food of men is very pronounced.

Usually, of course, rain falls from cloudy skies, but even if rain does not fall a cloudy sky has considerable effect on plants and possibly on man, which leads us to pay attention to the

PREVALENCE OF SUNSHINE

Everybody has heard of Sunny Italy. This map has some facts to show about sunshine. It indicates the number of hours the sun actually shines at any place in Europe and the United States in an average year. As the average time between sunrise and sunset is twelve hours, we have only to multiply 12 by $365\frac{1}{4}$ to learn how many hours of sunshine there would be if the sky were never clouded.

1. What is the product? Did you get the number printed on the map?

2. How many has Italy according to the map? Would it be reasonable to call it about 2500? Explain.

3. Express that in the form of a common fraction of the whole possible time it might be sunny. Do you see why the word "sunny" is chosen for this degree of sunshine?

4. How do the skies of southern Michigan compare with those of Italy?

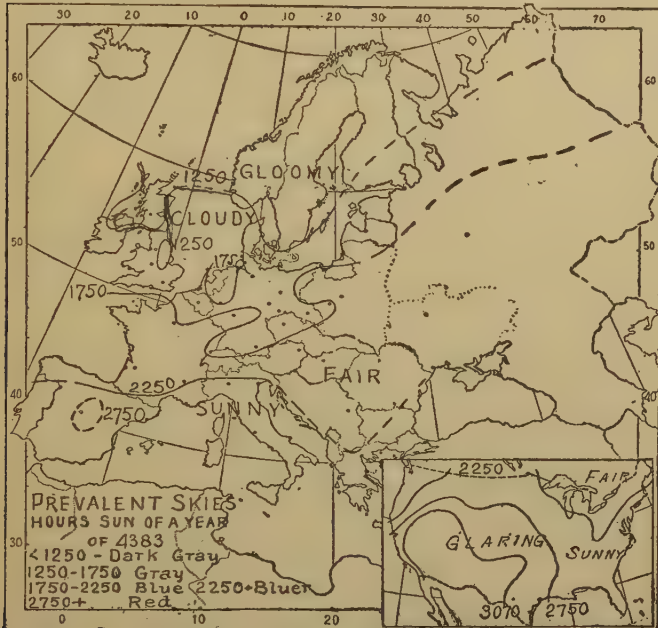


Fig. 58. Prevalence of Sunshine, after Bartholomew, in hours of average sunshine out of 4383 hours to the year. As usual the tinting recommended will greatly increase the expressiveness of the diagram.

Probably if Americans had never read or heard about Italian skies before going there it would not be so generally known among us as sunny. The English gave the name and most of us had read it applied to Italy time and time again before we ever saw Italy.

5. Does the map explain why the English should call Italian skies sunny?

6. What percentage of cloudy weather has the "cloudy" belt? We have to perform the divisions indicated by the fractions, $1250 \div 4383$ and $1750 \div 4383$, to get the answers.

7. Explain the appropriateness of calling these regions cloudy. The word *fair* is used by students of the weather to describe a sky that is partly clear and partly cloudy. That is why we place it here between sunny and cloudy strips.

8. Name five countries that usually have cloudy skies over most of their area.

9. Name two that have gloomy skies. Every one has heard of the Midnight Sun.

10. In what country is it seen especially?

11. What other countries must have it also?

They are less easy to get at. Tourist steamers used to go to the North Cape from Hamburg all summer long to see the Midnight Sun. Perhaps if we visited that country in midwinter we would know it as the land of the Midday Gloom. The tourists do not always see the sun when they get there, so prevalent are clouds. In 50 days of July-August, 1904, at Loen (62° N. 7° E.), there were but 10 with sunshine.

12. What fraction of the time is it *cloudy* in these lands of gloomy sky?

13. What part of the United States has skies habitually cloudy or gloomy? Most of our people live under fair or sunny skies, some millions of them where the skies are *glaring*! It has been supposed that we derive a certain excitability from this fact, when we are compared with Europeans.

14. Do you think of any month of our year as of glaring skies—when the light is unpleasantly strong, and dark glasses are desirable? In June, 1896, Chicago skies were cloudless 84 per cent of the time that the sun was above the horizon, though the next year the percentage was nearer 60.

15. What is the only city in Europe under a glaring sky that has half a million people?

16. Can you name two in the United States?

17. Name the cities of Fig. 15 that have cloudy skies.

18. Those that have fair skies.

19. Those that have sunny skies.

20. What sort of skies have Oslo and Stockholm?

21. What sort New York, Philadelphia, Cleveland, Detroit, Chicago, and Washington?

22. Referring to Fig. 9, tell under what sort of skies most of the Russians live.

23. How do the facts for the Mediterranean shores agree with what you learned from the maps of summer and winter rainfall?

TEMPERATURES

Note that the tints are symbolic of heat and cold. A month of *hot* weather is a month of summer. When a month averages above 68° Fahrenheit (=20° Centigrade) throughout all its hours and days, we are calling it a hot month; more than half its afternoons will reach 80°, which we call *hot*. A cold month averages under 32° F. (0°C.). One that averages anywhere between is mild. Under these definitions December, January, and February at Detroit are *cold*, March, April, May, and

June *mild*, July and August *hot*, and September, October, and November *mild*. Those are terms that we understand



Fig. 59. Temperature regions with regard to average monthly temperatures, at sea level. The northeast-southwest line separates hot summers from mild summers. Hot summers have one or more months hot, Athens four months, Budapest two. The other line separates cold winters from mild winters. Cold winters, too, may be one or many months long. Moscow five, Bergen one. Tint 4 pale red, 2 pale blue, 1 pale green, 3 red, white, blue, white bars. Tint land only.

then in this country. Europeans would not use the words that we do. We think the English winter mild (out of

doors, at least) and the Englishman calls it cold, but in this study, which is for Americans, our nomenclature must be used. The map counts months, then. *Some* hot months and *some* cold ones makes a hot summer and a cold winter, the *some* being any number from 1 to 11. There is a great difference between one hot month with four cold ones and four hot months with one cold one, but both will count on this map as hot summer and cold winter. Of the mild months that fill out the year nothing is said. They are taken for granted. In Europe there are a good many of them. Thus Odessa, like Detroit, with 2 hot months and 3 cold ones, has 7 months of spring and fall. Paris and London have 12. But it is the extreme weather that gives the accent of local climate.

1. What countries and parts of countries in Europe have all four seasons mild?

2. Has any part of Norway mild winter as well as summer?

3. How is it at the city of Bergen on the west coast? Most of the people of the United States are used to hot summers and cold winters.

4. What are the only six countries in Europe that have such temperatures as that?

5. How do the temperatures of Oslo, Stockholm, Lenin-grad, and Berlin differ from those of Chicago?

6. How does the London and Liverpool weather differ from Chicago's?

7. What large cities in Europe have temperatures somewhat like those of Chicago and Detroit?

8. Have we any state that people go to in winter because our winters are so cold?

9. What countries in Europe might people resort to for the same reason?

10. How does the temperature of Athens compare with that of Detroit?

11. Why should Europe have less extreme weather than North America?

12. What part of the continent should have greater extremes?

13. Does it?

CENTIGRADE TEMPERATURES

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
London,	3.4	4.3	5.6	8.9	12.1	15.7	17.3	16.7	14.2	9.9	6.1	4.0
Paris,	2.3	3.6	5.9	9.9	13.0	16.5	18.3	17.7	14.7	10.1	5.8	2.7
Hamburg,	0.0	0.8	3.0	7.2	11.6	15.6	17.2	16.6	13.6	9.0	3.8	0.9
Aalesund (62°N., 16°E.)	2.3	1.7	2.3	4.7	7.9	11.0	12.9	13.1	11.0	7.4	4.3	2.6
Stockholm,	-3.0	-3.5	-1.7	3.2	8.4	14.1	16.6	15.3	11.5	6.2	1.5	-2.0
Budapest,	-2.1	-0.2	4.4	10.6	15.6	19.3	21.3	20.3	16.1	10.6	3.9	-0.8
Moscow,	-11.0	-9.6	-4.8	3.4	12.0	15.2	18.6	15.7	10.4	3.6	-2.4	-8.2
Madrid,	4.5	6.3	8.5	11.7	15.9	20.4	24.7	24.2	19.1	13.2	8.2	4.3
Rome,	6.8	8.3	10.4	13.7	17.8	21.6	24.6	24.2	21.1	16.4	11.2	7.6
Athens,	8.0	8.7	11.3	14.9	19.9	24.3	27.0	26.6	23.3	18.9	13.9	10.0
Chicago,	-4.8	-2.9	1.2	7.9	13.4	19.7	22.2	21.6	17.9	11.1	3.6	-1.5

Division 1 of the map has Oceanic climate, and 4 is Mediterranean. What are 2 and 3? Of which type is Chicago? State the length of summer and winter for all eleven of these places. Suppose you found cold weather trying. Which would be worse, a four-month winter with averages -1, -2, -2, -1, or a two-month winter with temperatures -4 and -3? Why?

An important fact to bear in mind with regard to European temperatures is that all Europe has winter. We say the Italian winter is mild, but it is winter. The Italians do not warm their houses at all. They even sit at meals with the temperature in the forties when we should be wretchedly cold. One can stand it and they

have always stood it. There is no danger of freezing to death, nor will the water pipes burst, for they haven't any! But American tourists suffer very great discomfort from the cold of an Italian winter, not out of doors but within. Sweden is pleasanter for them since the houses are heated.

VEGETATION PROVINCES

Summer forests are not merely of the deciduous trees, like oak, ash, elm, and maple, that stand leafless through the winter in token of their suspended growth at that season, but also the evergreen pines, firs, and spruces whose annual rings of growth attest the same fact. All grow in the warm season and demand summer rainfall to grow with.

1. Name the countries that have summer woods in all or most of their territories.

2. Name those that have summer woods in some part. It will not be supposed that all of these countries are equally well grown up with forests.

Fig. 67 shows the distribution of forests in such detail as is possible. The present diagram merely classifies the vegetation that grows in a region by *kinds*. Some districts assigned summer woods on the map have no trees at all, but summer woods used to grow there and the region is suited to their growth. The characteristic ground-cover in the openings of the summer woods are the grasses that remain green throughout the summer and, in places where the weather is mild, through the winter too.

3. What common name for Ireland does that suggest? There are few woods in the island. What would be the ground-cover in the Mediterranean Ridge Province? See Fig. 65.

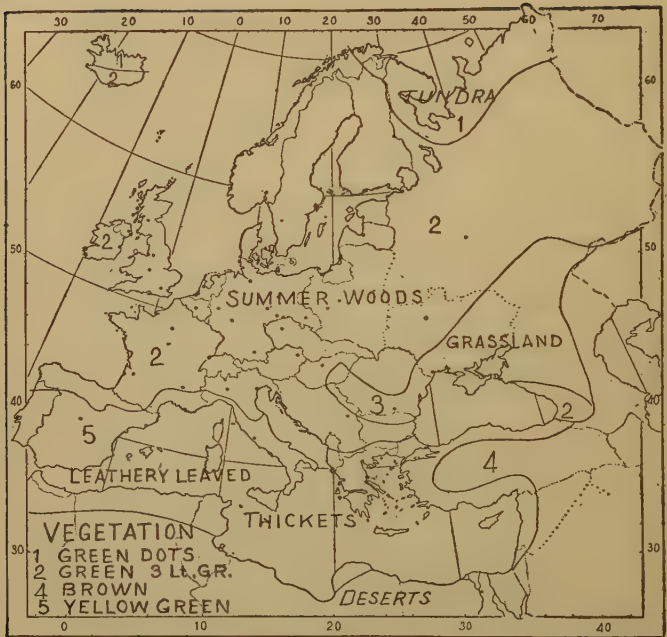


Fig. 60. Vegetation Provinces, after Schimper. It is important to tint as indicated on the legend with pale flat tints.

In the arctic regions of Russia and a little of eastern Norway the mild summer is so brief that few plants can produce and ripen seed to perpetuate themselves. Mosses abound among the flowering plants.

4. What name is given these regions on the map?
5. What third country is in this province?
6. What animal thrives here? The steppes are treeless plains with thin grass of brief growth.

7. What amount of rain falls on the steppes in a year? (See Fig. 55.)

8. Is their rainfall greater in summer or in winter? We must remember that the rainfall increases or diminishes gradually from place to place. On the dry side of the line of six inches rainfall are places of five, then four and three inches of rain. This should be borne in mind in reading values from the map. Grazing is the main occupation on the steppes and the population is of the usual type.

9. What is this? (See Fig. 9.) The leathery-leaved plants are well exemplified by the oleander, the tough coating of the leaf preventing evaporation.

10. At what season do they have their drought in the Mediterranean?

A tender leaf like that of the maple would shrivel up quickly under such conditions. The most important of the leathery-leaved plants to man is the olive. It has a tiny leaf with very hard coating and the total amount of leafage is very small.

11. What are the principal countries of the leathery-leaved plants?

It may seem incongruous to call the desert a vegetational region, but its plants, though few in number in a given area, are very special and of considerable variety.

12. Are there any deserts in Europe?

13. What two countries are fairly divided between summer forests and leathery-leaved plants?

14. Is there any country that has only the leathery-leaved plants?

Man has modified the natural distributions in the Medi-

terranean region very perceptibly. In the drier parts the cactus, brought from America, has now spread everywhere. Man has added groves of lemon and orange trees where he has been able to irrigate. The ancient domesticated flora was olive, wheat, and vine. The wheat grew in the winter rains and ripened in the beginning of the summer drought. Probably the plant originated on the eastern shores of the Mediterranean. The vine is not drought-resisting, but where there is water in the subsoil the long searching roots of the vine will surely find it. These three have long given Mediterranean man his food of oil, bread, and wine, main sustenance of a good portion of a hundred million people. Over against these are the old-time northern foods, meat, bread, and butter, with beer or mead for drink, prepared from barley or honey. These in the lands of summer rains. There grass covers the open country for cattle to graze. There rye, oats, and barley often thrive better than wheat on the fields where once stood the summer forests that have now retired to the rougher ground. And on the site of these forests now live the most numerous and richest peoples on the continent.

RAINY WINTERS

1. What relation to the seas has the whole region with winter rain in excess?
2. What in general is the difference of the facts for the Mediterranean and Atlantic coasts?
3. What differences are in evidence for the eastern and western Mediterranean?
4. What does the map tell us about the rainfall of

Red (1) Summer Rains slightly more than Winter Rains
 Blue - 2- Winter Rains slightly more than Summer Rains -
 Blue- 3- " " " much heavier " " "
 Bluest- 4- Almost all the Rain falls in Winter

5. Compare the season of rainfall in Palestine and Morocco.

The regions with a little more rain in winter than in summer are regions with plenty of rain at all seasons,

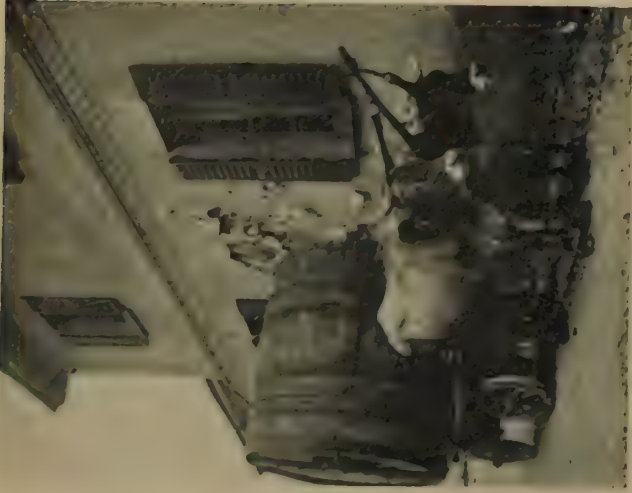
the lands of grassy meadows, of grazing cattle, of milk and butter. The lands of summer drought among the Mediterranean Ridges, on the other hand, know little of grass or cattle. They are the lands of the olive, where bread and oil are men's food instead of bread and butter (see Fig. 60), where in summer your eyes are hurt by the glare from a stony landscape.



Fig. 62. Olives for oil and cows for butter. After Fischer.

HERE COWS, THERE OLIVES

This diagram emphasizes the consideration of the last



63. Head-yoked Italian oxen



64. Not rich Italians, but sociable



65. Mediterranean leathery-leaved thickets



66. Barley and shadeless olives—Nîmes

figure. The cows need summer rain and the olive defies summer drought.

1. Does the map suggest that we should include the coasts of Africa and Asia Minor in the Mediterranean region?

2. What other maps have made the same suggestion?

The old idea of a geographical unit, a continent, was based on the conception of seas as separating land-bodies and land as connecting. But modern times find in the seas and oceans man's best means of communication, while land-masses may often separate sharply. Algeria is almost perfectly separated from Nigeria by the Sahara, but intimately associated with France by the Mediterranean. North Africa is indeed European in a thousand aspects. All the boatmen in the harbor at Oran speak Spanish. With Africa south of the Sahara it has very little in common. Spain, France, and Italy cannot be studied without studying Africa, nor Greece without Asia Minor and Egypt. The histories of these lands touch at every moment because their geographies are intimate. What suggestive word combinations are Spain and the Moors, France and Algeria, Rome and Carthage, Greece and Persia! A map of Spain that omitted the African shore of the Straits of Gibraltar would be a falsehood, and equally so one of Italy without Sicily and Carthage, or one of Greece without Asia Minor. The union of Spanish kingdoms was brought about by the common war against the Moor and Spanish governments today are wrecked by reverses to Spanish troops in Morocco.

3. Name the olive-growing countries in what should be the order of their production.

Something like seven-eighths of the oil is consumed in the countries that produce it, a considerable amount for making soap. After the War the Italian government forbade the manufacture of *Castile* soap. Why? And why called Castile? A great part of the olive oil of commerce is adulterated or imitated from cottonseed, peanut, and palm oils, that are worth about a third as much as the oil of the olive.

4. Why has France or England more cows than Spain, Italy, and Greece together?

The numbers of millions of cows in Spain and Italy have been put in the spaces not occupied by the tint for olives.

5. Do the maps for vegetation and seasonal rainfall justify this?

6. Explain.

7. What two localities in Russia are producing olives? Be sure your tinting was complete.

PRESENT FORESTS

Tint as called for on the map. None of our maps gains so much by tinting as this. Some of the small areas in Germany are hard to make out. Almost all the difficult ones are of shade 3. There are no data for Asia Minor, the Balkans, or the Iberian peninsula. These are known to have little forest.

1. What are the two great forest countries of Europe?

2. Why is it that the western one of the two exports somewhat more lumber than the eastern one?

3. Does the map agree with Fig. 60 about conditions on the border of the Arctic Ocean? The difficulty here is

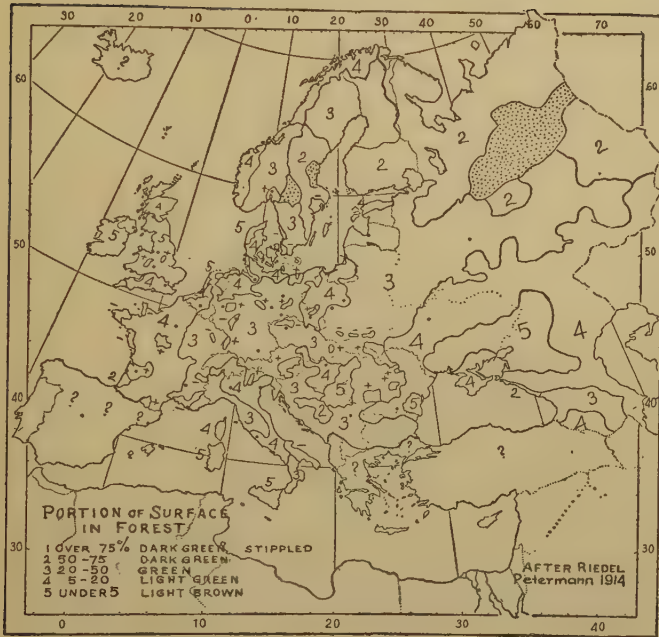


Fig. 67. Portions of Europe in Forest and Closeness of Forest Cover in 1914. + sign means greater percentage and — lesser percentage of forest than region about. Thus + near Bordeaux means (3) and in central France also, while — in Brittany means (5).

that the only data obtainable for northern Russia are for whole provinces. So the whole province is represented as if wooded like its southern part.

4. Name the five powers of the North Central Plains in the order of their forest possessions.

5. Why is England better able to dispense with forest

than some of her neighbors? Low marshy lands may remain treeless.

6. What light brown areas on the map are explained by this suggestion?

7. What porportion of Europe has some dark green shades?

8. What does that mean about the forest there?

9. Is it rather east Europe or north Europe that is wooded?

10. Why do not Spain and the Balkan countries report the condition of their forests?

11. Is it probable that they take care of them?

THE FORESTS OF GERMANY

Today the hilltops of England are quite uninhabited, bare sweeps of grass or moor. They seem to have been always treeless, apparently the only considerable islands in the vast forests that covered the land, and today they are just as manless. This is evident for the larger moorlands on Fig. 17. The forests have now disappeared and man has taken their place with farms and homes. The trees stood on excellent farming land and men cut them away as soon as they became able. Remember that in 1920 England and Wales produced 3269 bushels of grain for every square mile of their area when the United States produced but 1950 bushels.

Not unnaturally the men of the Stone Age in England lived on the bare hilltops. Where else could they live? At any rate that is where the remains of the villages are found with the greatest abundance of their tools. The forests withheld from them the best of the farm land until

they came to dispose freely of axes of iron and steel. So Major Powell tells us that the red Indian of Columbus's day lived in the natural openings in the American forests and grew his maize there, generally on poorer land than we utilize.

It is quite certain that the early German, too, lived in the natural openings in the forests. The sites of the Stone-Age villages make that clear. The stone ax is a hopeless thing with which to cut down even a single tree, though that might be done with the help of fire, if a canoe was to be made and many hands were available. To cut a forest was out of the question with such a tool, nor were the inroads of fire or grazing animals of significance. The Germans were few, yet crowded probably in their scanty forest openings, in the midst of abundant good land which the trees kept from them.

We use the map of Germany because only in the lands of careful, painstaking people like the Germans and French are such maps made. Three-fourths of Germany is now cleared of forests and the forests are fixed. That is, up to the War the Germans were growing as much new lumber every year as they cut down. It wasn't enough for their own use. In 1900 they imported nearly 50 million dollars' worth of lumber from the Baltic countries. But they had permanently in lumber all the land that would produce more in lumber than in any other crop.

1. What sort of land would that be?

Note in the southwest corner of Fig. 68 the white valley of the Alsatian Rhine—now French. Identify it on another map, which shows the Rhine and Alsace. It has the wooded Vosges Mountains on the west and the Black



Fig. 68. The Forests of Germany about 1910. After Diercke. The black parts are in forest.

Forest on the east. Black Forest is Schwarzwald in German.

2. Identify the following mountains of Germany on Fig. 68—Boehmerwald, Westerwald, Odenwald, Thüringerwald, and explain why they all end in *wald*.

Iron was known to the early Germans but not abundant till they began to trade with the Romans. Even more important for lumbering operations was capital. Lumbering operations call for large resources. How familiar to us in the American forest country the phrase Big Lumber Companies! The lumberman must be fed, housed, and supplied with tools and appliances to get out the logs,

machinery for sawing them, and arrangements for getting lumber to market. An individual who owns one or two hundred acres of timber would be foolish to think of cutting it himself. He sells it to a lumber company which has resources for handling it. Behind the lumber company is the bank.

3. Do you suppose any of our American states would look anything like Germany on a forest map? You can judge by what you see from the car windows as you travel.

The capital for lumbering operations first became available in Europe in the large French and German monasteries in the thirteenth and fourteenth centuries. They had stores of wool and grain for the peasants attached to their lands that constituted the only capital of the day. Of course banks did not yet exist. They alone could feed and supply the gangs of men needed to cut away the forests on any large scale.³ They entered on the work with zeal to increase their arable land and wealth and from that time onward the forests began to melt away. A general increase in wealth was the immediate result, great movements of grain, great increase of trade in general as in every case of the development of virgin soils.

³ Hausrath, *Pflanzengeographische Wandlungen der deutschen Landschaft*, p. 109.

CHAPTER VIII

THE CONTEST FOR THE NORTHERN PLAINS

EXPANDING FRANCE

In a period of peace we learn the boundaries of countries as if they were fixed, enduring things. As a matter of fact they have always been much subject to change.



Fig. 69. French territorial expansion up to Napoleon's conquests of 1810. Black the territory of 1154, with black spots where there were later losses.

France has her name from the western Franks who overran the country in the Dark Ages. France was then the basin of Paris, some of the best grain land in all the world. Since then France has expanded to the Mediterranean, to the Atlantic and to the Rhine. In this expansion France was not sending Frankish or French families into empty country, but pushing against and conquering lords of lands around, or being conquered by them. And this France that was fighting and trying to conquer was not "a group of people under one government together with the land from which they derive their sustenance," but it was a ruler, a King who decided what he wanted and went after it. He was France. The people and the territory were his. When he won in battle he won more subjects and more territory and more tribute. He dispossessed the ruler of neighboring territory. Or he lost and his territory or some of it was taken over by a neighboring ruler. Other things went on as before. More than half the "French" territory of 1810 was lost to France again in 1816.

The monarch's conception that he was France tempted and invited him to enlarge his territory. The revolt of the nation against the monarch's point of view made good the people's right to be the country. It should do away with the desire for a neighbor's land. The northern plains of Europe for a thousand years have been the scene of struggles between monarchs for territory. The people neither knew nor cared why the kings fought. It is extraordinarily difficult for a nation to find out what it wants, even when set the task. When a monarch flatters the people and decides for them they are saved a painful

effort. Leaders, demagogues, kings, or statesmen have the function of thinking for the people and making them like it. A wise king would be such a relief, but, alas, wise kings have always proven so difficult to find! Was it because peoples find it so hard to decide what they want that Frenchmen closed their revolution to establish the rights of man by allowing Napoleon to make them think they wanted to rule all Europe?

1. What further information is needed before you can answer—How large is France?

2. Is it probable that but for the English Channel the French conquests of 1810 would have included England?

3. Is it probable that Italians, Germans, Swiss, Spaniards, and Swedes remember 1810? With pleasure or dislike?

4. Was Sweden really a part of France in 1810? Explain your answer.

5. In what two directions has France mostly expanded?

6. Were any expansions of France made peaceably?

7. Is it a service of history that it keeps fresh the memory of national defeats?

EXPANDING ENGLAND

What is the "England" that rules in India? Does it include Wales and Scotland, and up to 1920, Ireland? Geographically the London basin has always been the heart of England. For instance, the England of the year 500. At that time the people who were not to be included in England till 950 were nothing but *Britons!* They became English when the English conquered them, the people about modern Birmingham and Manchester, for

instance. But the Scotch and the Welsh and the Irish never became English. For them remains the geographical expression Briton. They may suggest it if you call them English, but they do not use it themselves, just *Scotch* or *Welsh*. A Scotchman needing government protection goes to the British Ambassador and declares himself a British subject. The names are awkward—United Kingdom of Great Britain and Ireland for the name of a country! Only lawyers or public officials could stop to call it that. The workaday world called it England. When the Germans prayed God to punish England they had the Welshman Lloyd George as much in mind as any Englishman. The Empire is even worse off: it has no official name, so any one is free to call it the British Empire, or again England for short. Ireland in becoming self-governing renounces her share in the government of India just when it is beginning to look as if the self-governing dominions must be given a share in the management of imperial affairs. The historic fact remains that Englishmen have fought everywhere in the British Isles and taken over at one time or another the control of the whole thing, yet with general participation in government.

England has a government headed by a king. His dominions are shown for 500, 950, 1370, 1550, and again 1703.

1. Did England ever fight for other European territories than these?

2. What territory do the English possess in Europe outside of the British Isles?

3. In what direction has all the English expansion in the British Isles occurred?

4. What do you see on the map to mark the site of London?

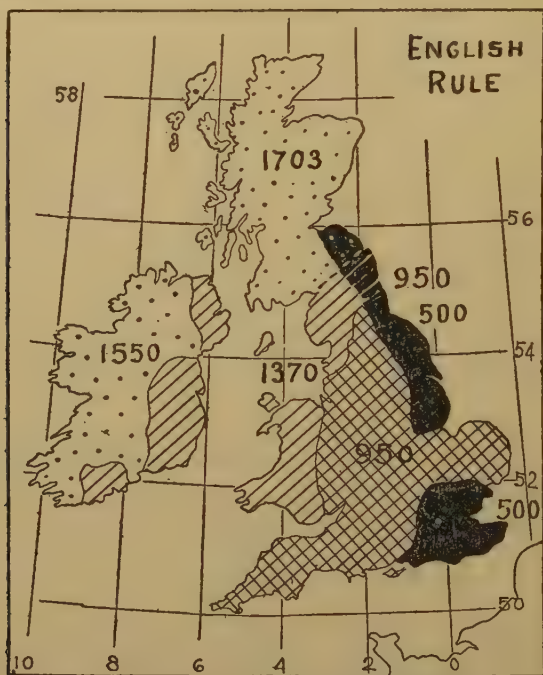


Fig. 70. The Spread of the Rule of England.

5. Was the last portion of the British Isles to become English the westernmost part?

6. Is there any connection between the direction of English expansion and the location of present Keltic speech?

7. The name of the people who occupied the fertile

London basin is the name that has gained use for the whole country. Is there anything like that in the expansion of France?

EXPANDING RUSSIA

The great part of the North Central Plain and the whole northern plain of Asia is occupied by Russia, land of powerful, absolute rulers, where the emperor was not merely Russia, but he was the law.

1. France originated in the basin of Paris, England in the London basin. Where shall we say Russia had its origin?

2. Which was the first ocean-sea reached by Russia in its expansion? Why ocean-sea?

3. Then Russia was called *Muscovy* and the people *Muscovites*. Why?

4. When did it reach the Baltic? What two other seas at the same time?

5. When did it reach its southernmost ocean-port? Which is that?

6. Why were the Russian expansions in Asia so much larger than those in Europe?

7. Consider the two islands of "Russia in 1600" enclosed in "1400" territory. What does it mean?

8. The space between parallels along the straight line meridians in 700 miles. How many miles did Russia advance westward between 1400 and 1600?

9. How many from 1600 to 1800? How many from 1800 to 1900?

10. What is the name of the westernmost expansion of Russia?

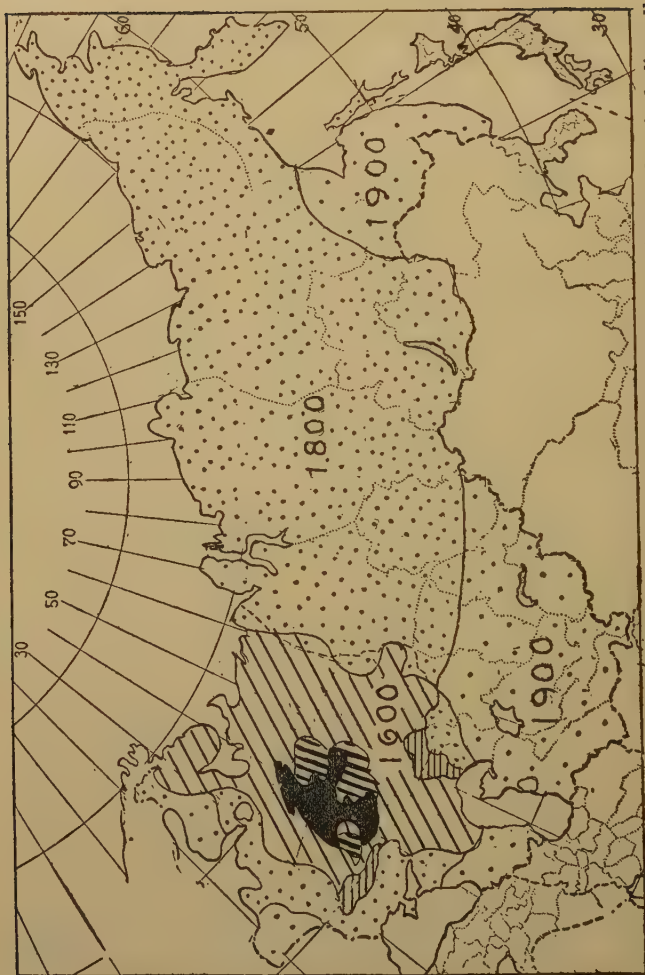


Fig. 71. Russia in 1400 (in black), 1500, 1600, 1700, 1800 and 1900, each later date including all the earlier territories.

11. What country is that now?
12. Does Russia or Muscovy as a name correspond best to England and the London Basin?
13. Have all these additions of territory been conquests?
14. Do complete ignorance and obedience of the subjects go appropriately with autocratic power for the Tsar?
15. Is it to be expected that the Russian nation shall be able to recognize its own wants readily? Why?

EXPANDING PRUSSIA

1. The meridian in the northwest corner has ten degrees in sight. Between parallels it must measure about 700 miles. Using that for measure, what is the greatest extent in a straight line of the territory in German control in 1917?
2. Brandenburg, Prussia, and Germany are three names for this territory. Has there been always a central city comparable to London in England and Paris in France?
3. Is there a fertile central territory comparable to the London and Paris basins?
4. Has Prussia expanded both eastward and westward?
5. Make out a comparison between the Prussia of 1917 and the France of 1810.
6. What was the conception of the state in each case?
7. Is it fair to say all this is nothing but the increase of the power of a ruler and his descendants over greater and greater portions of the Northern Central Plains?

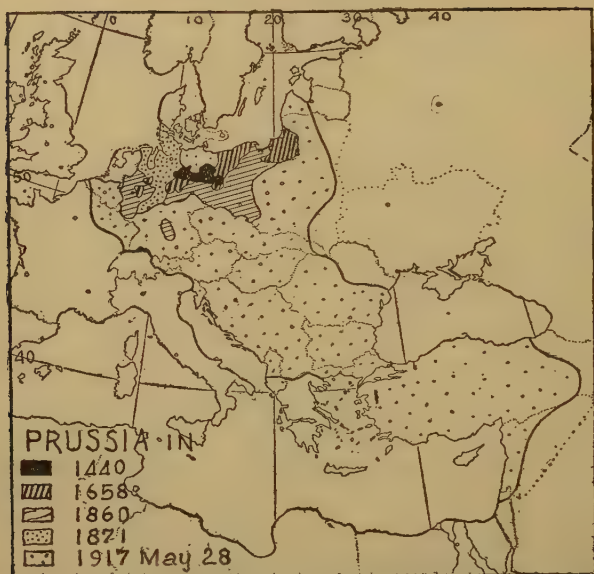


Fig. 72. Prussia expanding to its greatest territorial control on May 28, 1917. Inland (black) in 1440, to shore of Baltic in 1659, while the dotted area includes the Turks.

THE CONTEST FOR THE PLAINS

All these maps go back to the fourteenth century, when Europe was cutting her forests of the great northern plains and making available for the first time the enormous wealth of her soil. This epoch was a part of the Dark Ages. The good king of those days enlarged his territories by war, and ruled his people with that plan in view. It should be noted that the four Powers today possess the Great Northern Plains between them. Belgium and Hol-

land exist by acquiescence of greater powers. The Plain has played a great rôle in history, that has not always been appreciated. Mountains exert a powerful influence on the minds of men, and have always imposed a certain material control on their movements. But it is the rôle of the plains to breed the dominant nations. In earlier days men moved about mostly for war, and each of the great nations has won its present boundaries by centuries of fighting. A feeble people may survive a long time in the shelter of mountain fastnesses, but on the plain there is no defense for a people but its own might in battle. The little groups of people that arise on an extensive plain must, as they grow, inevitably meet to fight each other for the mastery. The victor absorbs his enemies. With each such victory a greater nation appears in the place of two lesser ones. Tomorrow it may happen that victory passes to the loser of today, but though the actors change, the law of the plain is inexorable. Feebler peoples tend to disappear and a few greater ones to take their place. These greater nations in turn meet, push their boundaries now this way, now that, and maintain standing armies to keep what they have taken or recover what they have lost. Nine kingdoms divided the English plains in the seventh century. The eighth and ninth centuries were passed "in the struggle of Northumbrian, Mercian, and West Saxon kings to establish their supremacy over the general mass of Englishmen, and unite them in a single England."¹ Now it is not merely one England, but it dominates Wales, Scotland, Ireland, and the British Em-

¹ Green, *Short History of the English People* (N. Y., 1888), p. 19.

pire. The basin of Paris was the first France. There first settled the Frankish tribes from whom the country takes its name, the rich plain of wheatfields that intoxicated Rome with sudden wealth, when Caesar brought its tribute to Rome. Today France includes not that plain merely but Brittany, the Central plateau, and Alpine Savoy. Our maps show similar humble beginnings of Prussia and Russia. It would be difficult to enumerate all the nations that have disappeared to make place for Russia; Lithuania, Estonia and Poland disappeared as political powers, succumbing in the contest to rise again on the defeat of the Central Powers. Had any of these been a little stronger, Russian nationality would have been lost. The plain was bringing out the victor. The old-time kings were the real leaders of men. Caesar developed his military genius in the conquest of the western end of the Great Plain of Europe, which he called Gaul and we call France. Napoleon developed his on the same ground and pushed it overhastily as far as Moscow across the plain. These are the two greatest names in warfare. Kaiser in Germany and Austria, and Tsar in Russia, are only corruptions of Caesar's name, applied by flattering courtiers to modern rulers. But the Tsar's soldiers have set him down from his throne, killed him and his family miserably, and the German and Austrian Kaisers retired ignominiously to Holland and Switzerland.

In the same two minor countries sit a newborn league of nations and an international court of justice, where is being wrought out an earnest attempt to shape events by law.

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